NAVAL STATION NEWPORT
RESTORATION ADVISORY BOARD MEETING
September 17, 2003

On Wednesday, September 17, 2003, the NAVSTA Newport Restoration Advisory Board (RAB) gathered at the Officers' Club for their monthly meeting. The meeting began at 7:10 p.m. and ended at 9:15 p.m.

In attendance were John Vitkevich, Thomas McGrath, David Brown, Emmet Turley, James Myers, Thurston Gray, Thomas Reardon, Howard Porter, Manuel Marques, Claudette Weissinger, Kathy Abbass, Stephen Parker (TtNUS), Franco LaGreca (EFANE), Lisa Yeutter (EFANE), Stacey McFadden (TAG/AICAB), David Dorocz (NAVSTA), Captain Robert McLaughlin (NAVSTA), Gregg Kolhweiss (NAVSTA), Kathy Marley (NAVSTA), Paul Kulpa (RIDEM), and Kymberlee Keckler (USEPA).

Mr. John Vitkevich opened the meeting and welcomed the group.

MEETING MINUTES

There were no changes to the minutes of the July meeting. Mr. Vitkevich asked for a motion to accept the minutes, which was seconded and then carried.

McALLISTER POINT POST DREDGING HABITAT SURVEY 2003 PRESENTATION BY - LISA YEUTTER (EFANE)

Ms. Lisa Yeutter began with an overview of the McAllister Point Habitat Survey. A copy of the slide show presented is provided as enclosure (1).

Ms. Yeutter stated that prior to the dredging of the marine sediment a Baseline Habitat Survey and Essential Fish Habitat Assessment was completed in 2000/2001.

Following the dredging of the near shore area off McAllister Point, the Navy performed eelgrass seeding and transplanting, and constructed six artificial reefs to restore the natural habitat impacted by the dredging.

Lisa Yeutter stated the goals of the 2003 Post Dredging Habitat Survey are to monitor the remnant eelgrass bed and to perform inspections of the six artificial reefs. Ms. Yeutter further stated that the 2003 Spring Habitat Survey and Summer Habitat Survey have been completed.

A general biological survey of the artificial reefs was part of the Spring Habitat Survey. The artificial reefs will be compared to the natural, nearby reef north of McAllister Point.

Ms. Kymberlee Keckler asked if the 'remnant' eelgrass refers only to the eelgrass that was not disturbed by the dredging. Ms. Yeutter stated the eelgrass being surveyed is eelgrass that was not affected by the dredging.

Ms. Claudette Weissinger asked why the Coddington Cove Breakwater Reef was not used as a reference area for a comparison to the artificial reefs. Ms. Yeutter stated the Breakwater Reef was not chosen for comparison since it has a higher pitch and the slope of the reef is greater.

Ms. Yeutter stated the Summer Habitat Survey included sediment profile interface photography and bathymetric and side scan sonar surveying to examine the sediment and various objects on the bottom.

Dr. Kathy Abbass asked how tall the artificial reefs stand from the bottom. Ms. Yeutter stated the smaller stone is approximately one foot from the bottom and the larger stone approximately two feet from the bottom.

Dr. Abbass asked for the exact size of the stone placed in the artificial reefs. Ms. Yeutter stated the size of the smaller stone was approximately 4-6 inches and the larger stone approximately 8-12 inches.

Dr. Abbass asked for the exact coordinates of the six artificial reefs. Ms. Lisa Yeutter provided the following coordinates for the approximate center of each artificial reef. A schematic of the reefs is located on page 9 of enclosure (1):

Reef (1) 7*1.31198072*W/*41.54446778*N
Reef (2) *71.31162533*W/*41.54411291*N
Reef (3) 7*1.31127161*W/*41.54375704*N
Reef (4) *71.31092197*W/*41.54340327*N
Reef (5) *71.31056378*W/*41.54305145*N
Reef (6) *71.31020579*W/*41.54270077*N

Ms. Stacy McFadden asked if the transplanted eelgrass was successful. Ms. Yeutter stated that the eelgrass seeding and eelgrass transplanting was not very successful in these areas.

Lisa Yuetter told the RAB that the 2003 Post Dredging Habitat Survey will include an additional Fall Habitat Survey to be performed in October of 2003.

NUWC DISPOSAL AREA - STUDY AREA SCREENING INVESTIGATION PRESENTATION BY – STEPHEN PARKER

Mr. Stephen Parker began his presentation with an overview of the NUWC Disposal Area. A copy of the slide show presented during the discussion is included as enclosure (2).

Mr. Parker stated the NUWC Disposal Area is presently being evaluated and the areas of concern have been identified. Mr. Parker further stated that information from persons associated with the site and its past use have been helpful in identifying areas of concern.

The work plan investigations include a study of the soil gas, surface water and sediment, test pits, borings and wells. The specific findings of the study area screening investigation are described in enclosure (2).

The soil gas results show that relative concentrations are indicative of where contaminants are present, but not how much is present. Contaminants identified as part of the soil gas study include: Gasoline type contaminants, Hydrocarbons (C11-C15), and Trichloroethane (a cleaning solvent).

As part of the soil gas study, Mr. Parker stated that it is possible the high concentration of hydrocarbons which are found at the southeast corner of the study area could be explained as a result of creosote seeping from the nearby telephone pole.

Mr. John Vitkevich stated that back in 1974 utility poles were removed from Pier 2 for disposal. Mr. Vitkevich offered to research more information on where the utility poles were disposed of.

As part of the investigation, surface water and sediment samples were collected. The results show a high concentration of lead at several locations. The results

also show a higher concentration of chemicals in depositional areas.

Test pits were installed to evaluate the soil conditions 0-10 feet deep. The test pits contained large objects such as rubble debris, brick, and concrete, as well as metal, aerosol cans and crushed drums.

Soil borings and groundwater samples were taken at various locations, to investigate at deeper depths. Drive points were used to help determine the flow of the groundwater.

Bedrock wells were installed at locations where there is a higher concern for contamination. These wells will help better describe how the contaminants are moving.

Mr. Howard Porter asked what is the depth to groundwater. Mr. Parker stated that groundwater was found at 10-12 feet.

Mr. Porter asked if the contamination was flowing downhill into the nearby pond. Mr. Parker stated the contamination has the ability to move and the groundwater and contamination may be flowing toward the pond.

Dr. Abbass stated that a local dry-cleaner located in Middletown, was found to have a past practice of dumping solvents. Dr. Abbass suggested that this may be a contributing source of contamination.

Mr. Parker stated that the location of the dry-cleaner is a far distance from the site. The monitoring wells would have to be very deep to find the contamination since the flow of the groundwater would seep deeper into the bedrock and deeper into the ground as it traveled.

David Dorocz told the RAB that Deerfield Pond is downgradient of the NUWC Rubble Fill and, the 2-acre pond receives drainage mostly from the surrounding community. He further stated that Deerfield Pond has a dam where water is pumped to the adjacent Wanumetonomy golf course. The water is pumped to the golf course pump house and then to a pond located in the center of the golf course. The water is then used for irrigation.

COMMITTEE REPORTS

Project Committee – Emmet Turley

Mr. Emmet Turley provided information on the various aspects of dredging. Enclosure (3) is provided as this months Project Committee Report.

Education Committee – Kathy Abbass

Dr. Kathy Abbass discussed the draft introductory training manual provided to the RAB at a previous meeting. The training manual will be revised based on review comments provided by the RAB. The manual will then be printed and distributed to newcomers, and serve as a reference document.

Planning Committee – Thomas McGrath

Mr. Thomas McGrath revised the RAB Planning Schedule with the RAB members. Enclosure (4) is a copy of the revised planning agenda for the next four months.

An overview presentation will be given by the Navy and the USEPA to present a TAPP/TAG Overview. Ms. Kymberlee Keckler asked the RAB to forward specific questions they would like to see addressed during the presentations.

Membership Committee – Thurston Gray

Mr. Thurston Gray announced there are presently thirteen community members. There were eleven community members present at the meeting.

Mr. Vitkevich announced that Mr. Christopher Burnett who was not able to attend the meeting. Mr. Burnett has recently been accepted as a new RAB member by a majority vote.

Mr. Gray reminded the RAB that the community website has been established and the new address is www.rabnewport.org.

NEW BUSINESS

Mr. John Vitkevich told the RAB he will not be able to attend the RAB meeting in October.

Ms. Kymberlee Keckler announced that Mr. Michael McGagh, an EPA representative, will be presenting a TAG Overview to the RAB at the next meeting.

NEXT MEETING

The next meeting of the Restoration Advisory Board (RAB) will held on October 15, 2003, at 7:00 p.m. at the Officers' Club.

Enclosures:

(1) McAllister Point Post Dredging Habitat Survey 2003
(2) NUWC Disposal Area - Study Area Screening Investigation
(3) Project Committee Report dated September 18, 2003 on the Highlights of Dredging
(4) Planning Committee – Planning Schedule

McAllister Point Post Dredging Habitat Survey - 2003 Project Update

Restoration Advisory Board Meeting

Naval Station Newport

17 September 2003

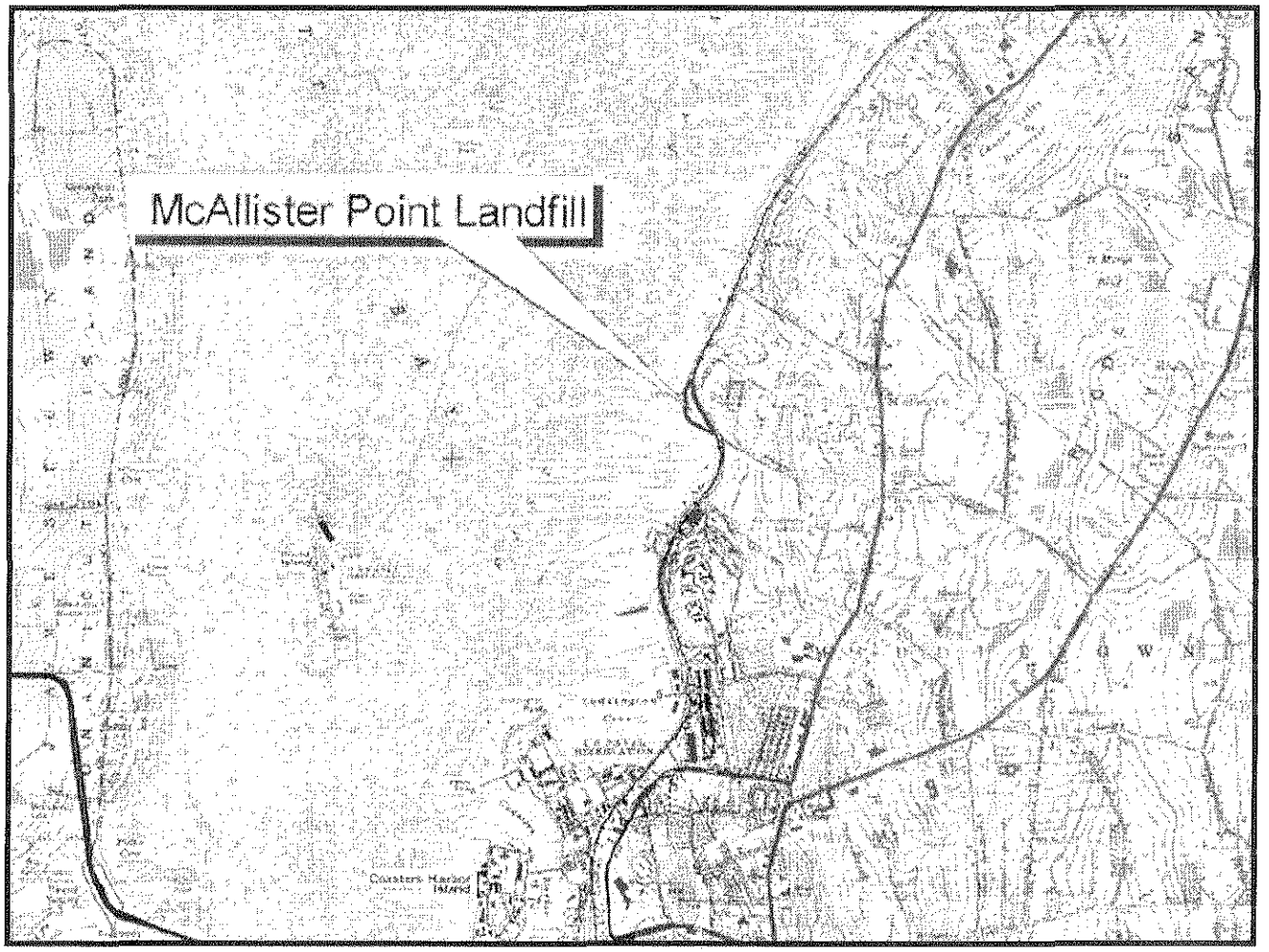
Presented By:

Lisa Yeutter, E.I.T.

Engineering Field Activity Northeast

Enclosure (1)

Location of the McAllister PointLandfill



Site History

1955 to mid 1970s - McAllister Point Landfill in operation

1993 - Interim ROD issued, selected remedy capping

1995/1996 - Construction of the landfill cap

1997 - Contaminants in the sediment posed risk to human health and the environment

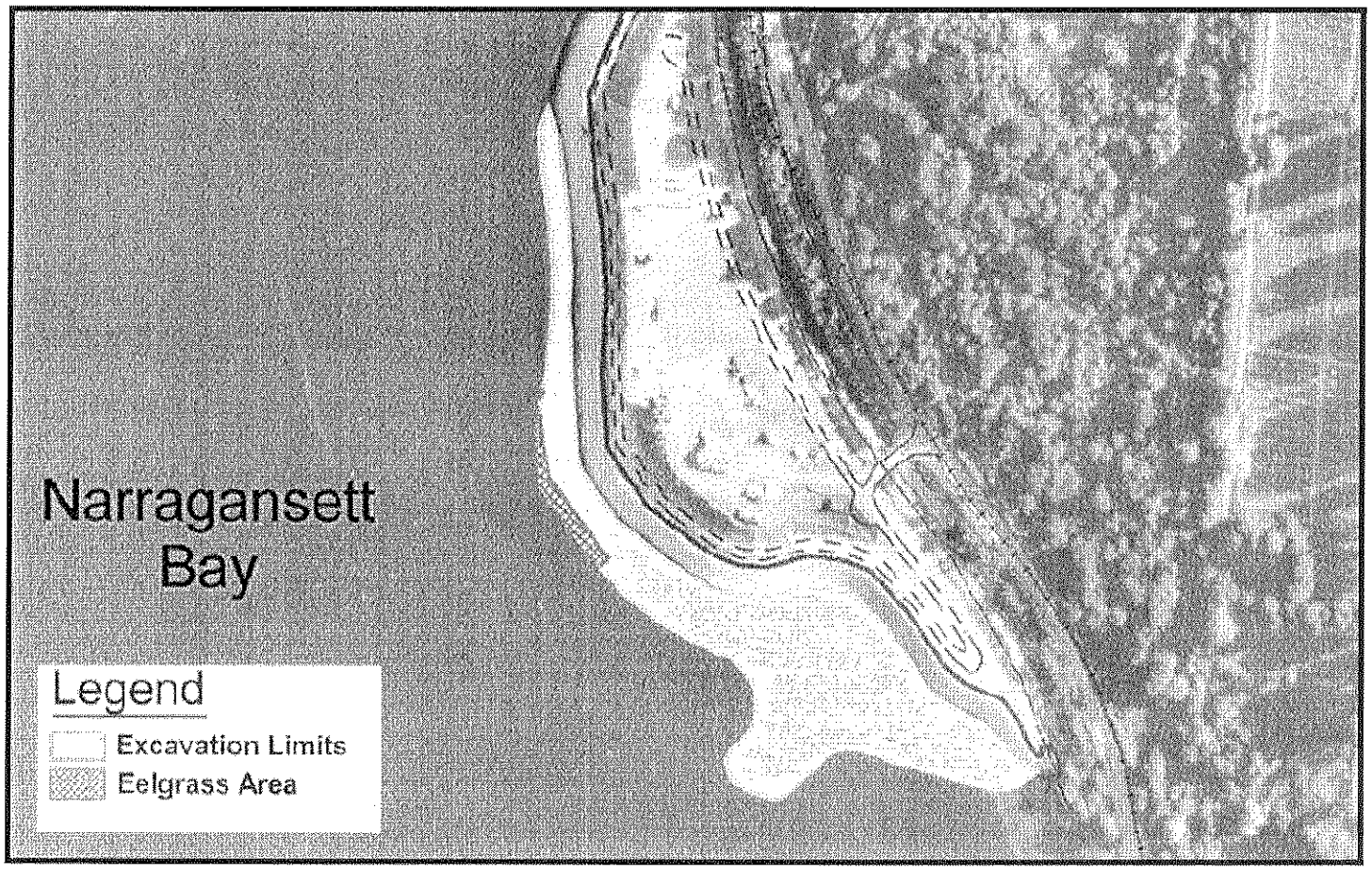
2000 - ROD issued for sediments, selected remedy dredging

2000/2001 - Baseline Habitat Survey and Essential Fish Habitat Assessment was completed in the offshore area

2001- Completion of dredging of marine sediment

- Off-site eelgrass seeding and transplanting
- Artificial reef construction

Eelgrass and Dredge Areas



Offshore Habitat Monitoring Efforts

November 2001 - Trough Survey

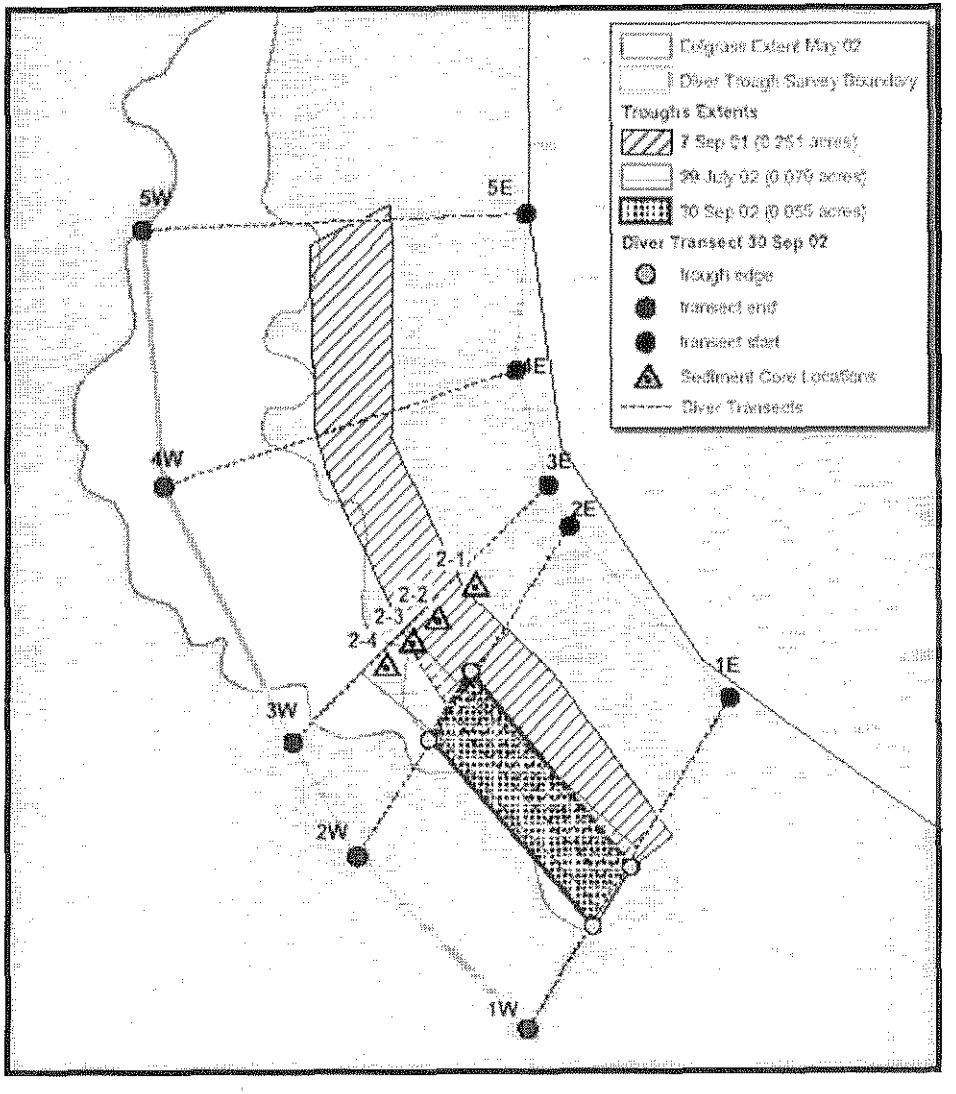
May 2002 - Eelgrass and Trough Survey

July 2002 - Eelgrass and Trough Survey

September 2002 - Trough Survey

The Long-term Monitoring Plan is being developed.

Trough Area


Eelgrass Extent May 02
Diver Trough Survey Boundary
Troughs Extents
7 Sep 01 (0.251 acres)
29 July 02 (0.079 acres)
30 Sep 02 (0.055 acres)
Diver Transect 30 Sep 02
trough edge
transect end
transect start
Sediment Core Locations
Diver Transects
5W
5E
4E
4W
3E
2E
2-1
2-2
2-3
2-4
1E
3W
2W
1W

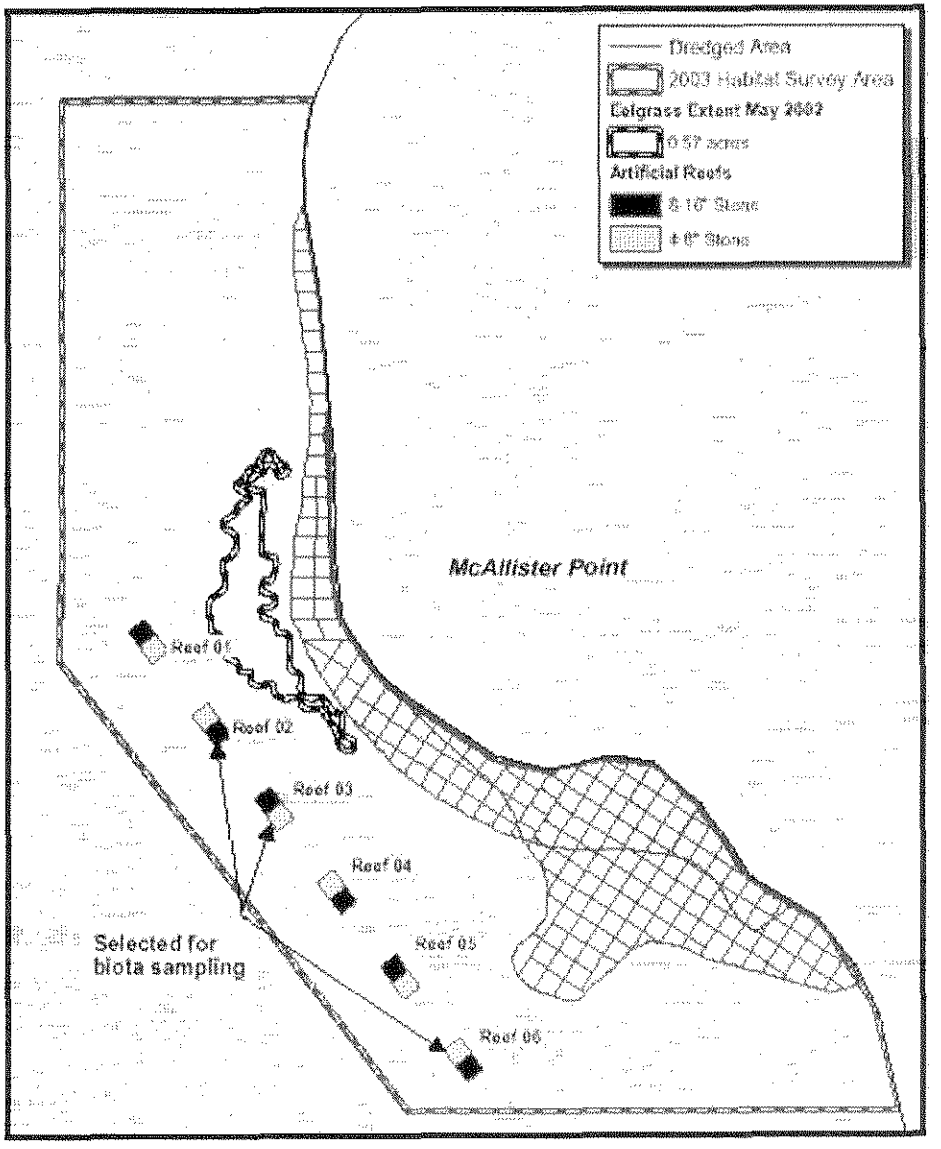
Goals of the 2003 Habitat Survey

- Remnant Eelgrass Bed
  - Evaluate natural expansion of the eelgrass bed
  - Determine if the benthic habitat is returning to pre-dredge conditions
- Artificial Reefs
  - Determine if the artificial reefs are stable
  - Evaluate the habitat value provided by the artificial reefs

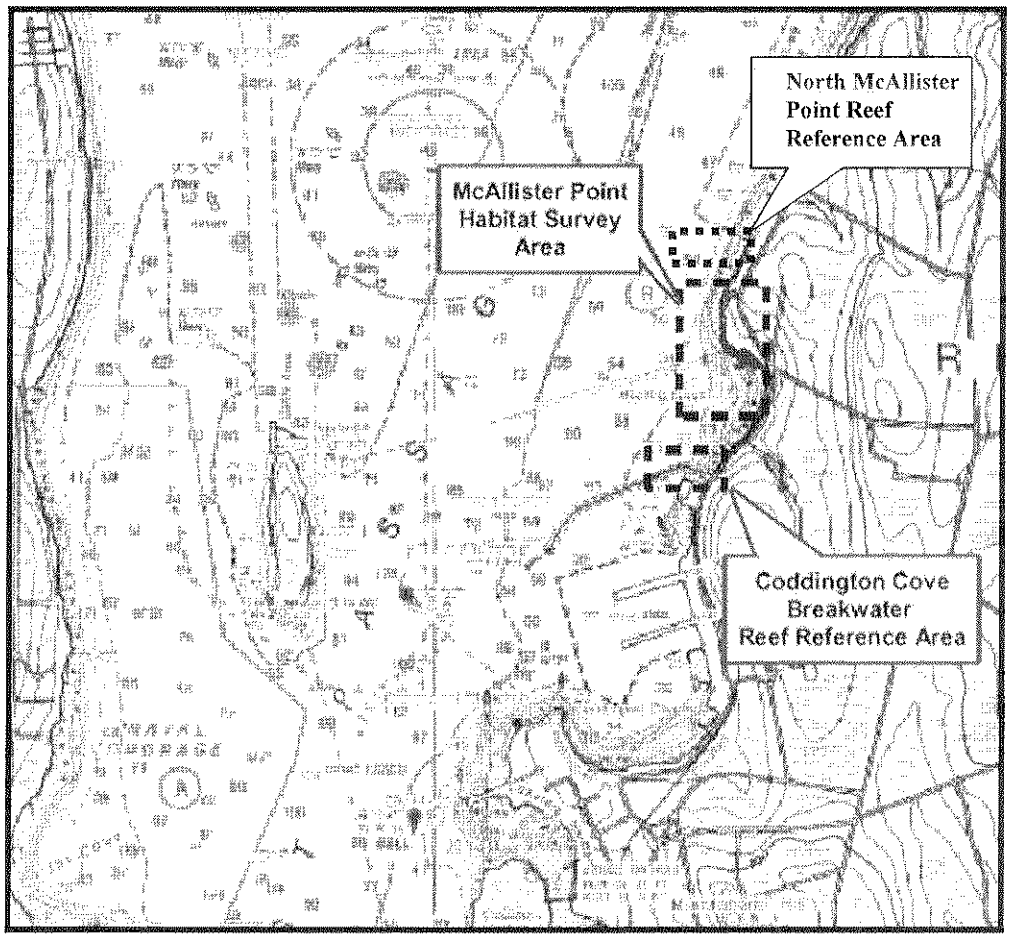
Overview of 2003 Habitat Survey Fieldwork

- Spring (April)
  - Assess Remnant Bed Expansion
  - Initial Reef Inspection and Monitoring
- Summer (July)
  - Assess Remnant Bed Expansion
  - Reef Monitoring
  - Single-beam Bathymetric and Sidescan Sonar Surveys
  - Sediment Profile Interface Photography
- Fall (Scheduled for October)
  - Assess Remnant Bed Expansion
  - Reef Monitoring

2003 McAllister Point Habitat Survey Area



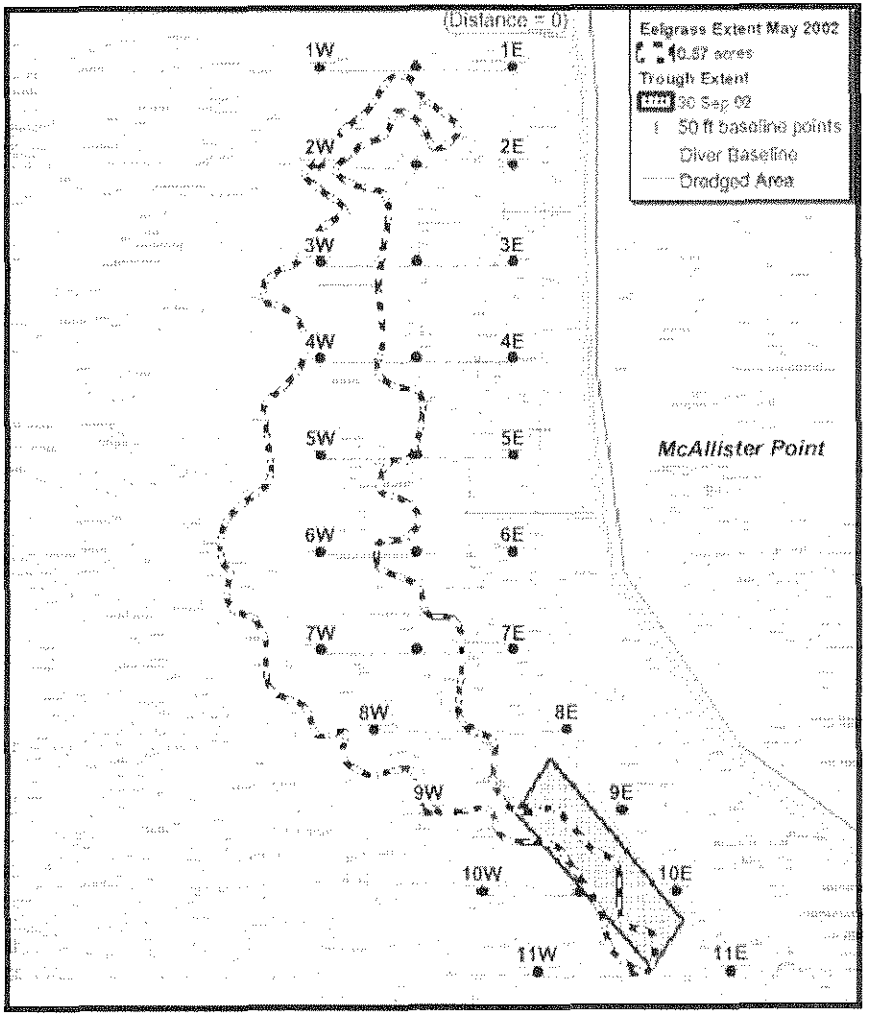
Reef Reference Area



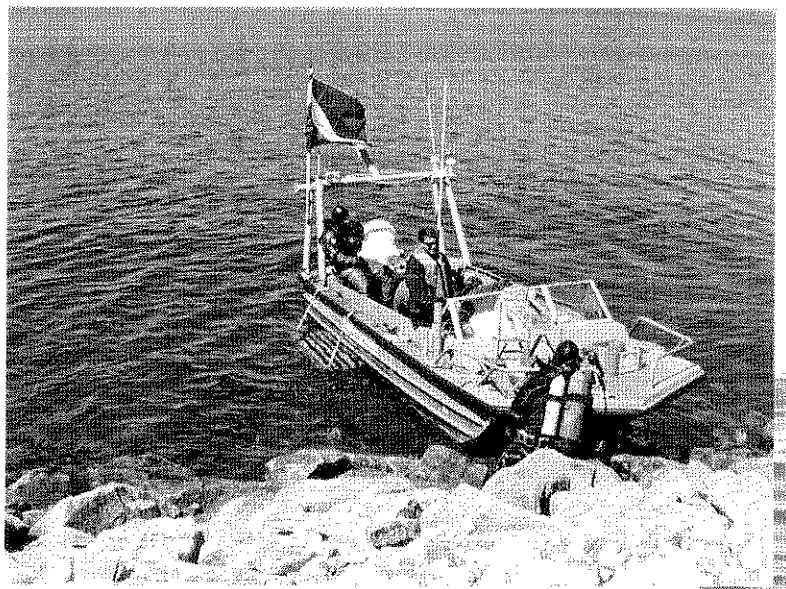
Spring Survey

- Remnant Eelgrass Bed
  - Establish baseline for eelgrass expansion measurements
  - Diver survey
  - Planview photography
- Artificial Reefs
  - Inspection of physical characteristics
  - Sedimentation Rod Installation
  - General biological survey conducted by divers on transects
  - Planview photography
  - Trap deployment/retrieval and species inventory
  - Suction sampling

Diver Transects and Trough Extent

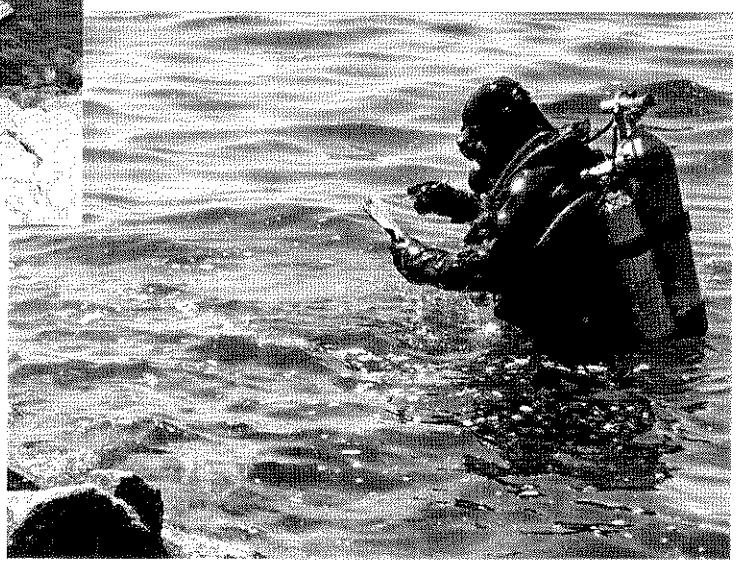


Spring Photographs

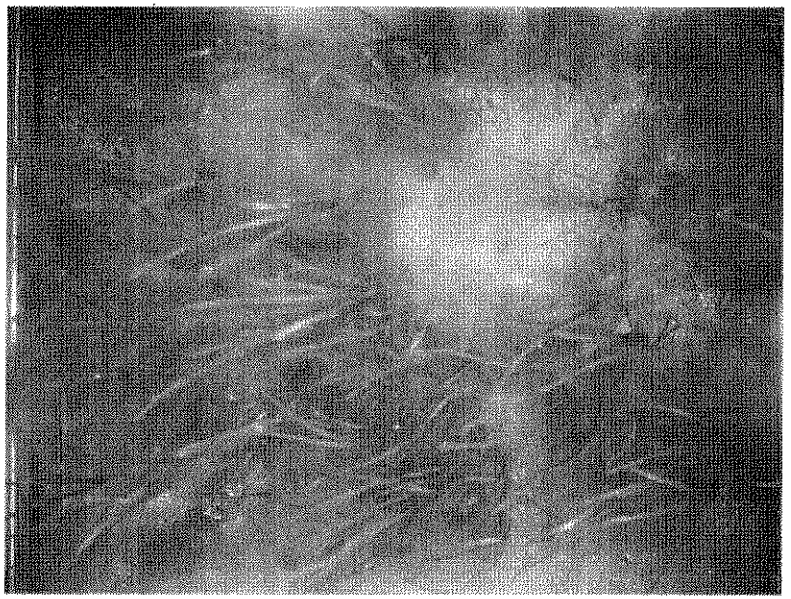


Installing eelgrass stakes

Recording eelgrass locations



Planview Photographs



Eelgrass at boundary of bed

Planview of artificial reef

Spring Survey General Observations

- Remnant eelgrass bed appeared healthy
- Reef structures intact and stable
- Reef biological survey
  - sea stars, green crabs, hermit crabs, spider crabs
  - brown algae
- Fish Traps
  - cunner, crab
- Suction Sampling
  - no organisms

Summer Survey

- Remnant Eelgrass Bed
  - Expansion Measurements
  - Diver survey
  - Planview photography
- Artificial Reefs
  - Sedimentation Rod Measurements
  - General biological survey conducted by divers on transects
  - Planview photography
  - Trap deployment/retrieval and species inventory
  - Suction sampling
- Sediment Profile Interface Photography
- Bathymetric and Side-Scan Sonar Survey

Sediment Profile Interface Camera

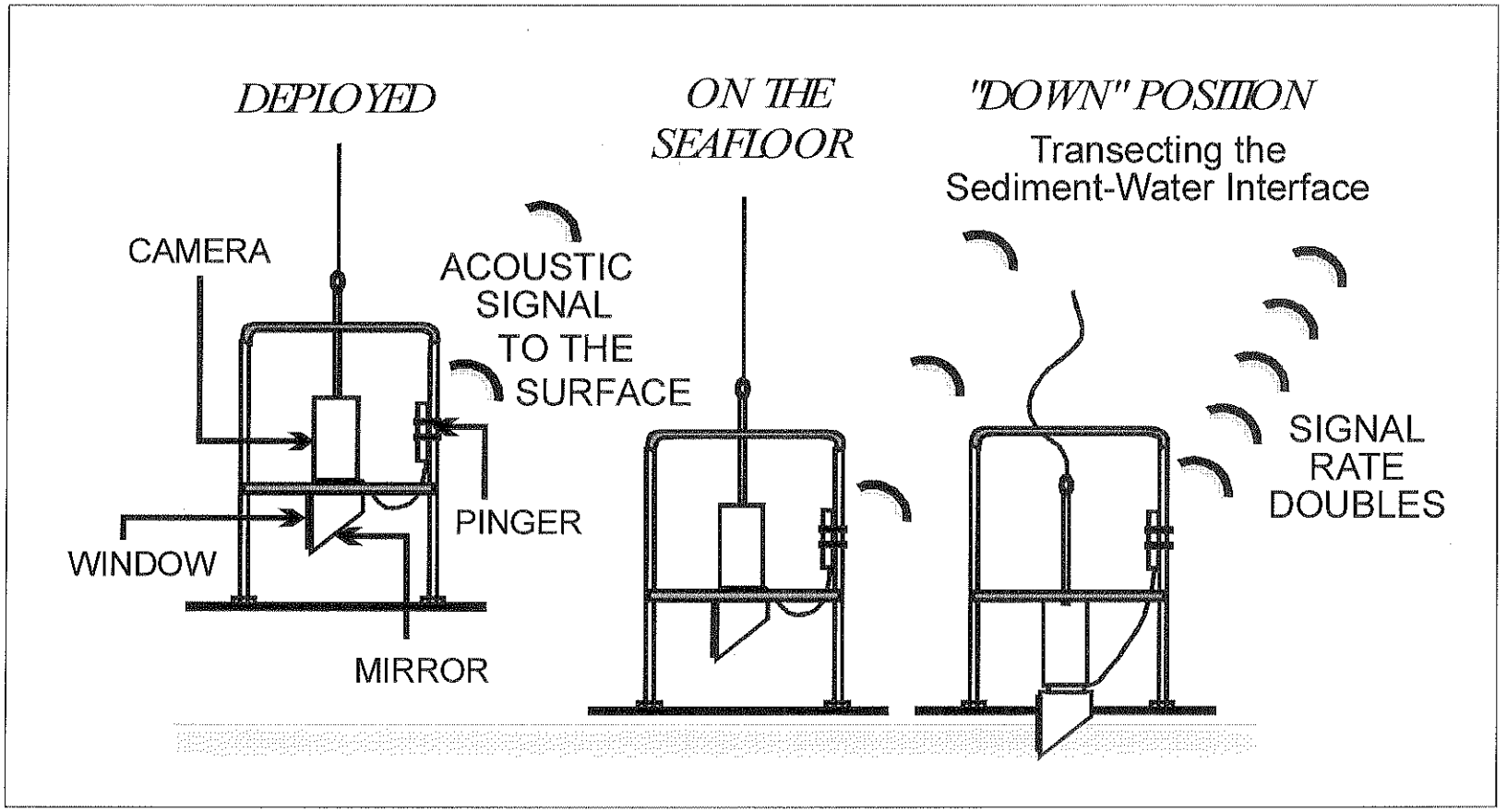
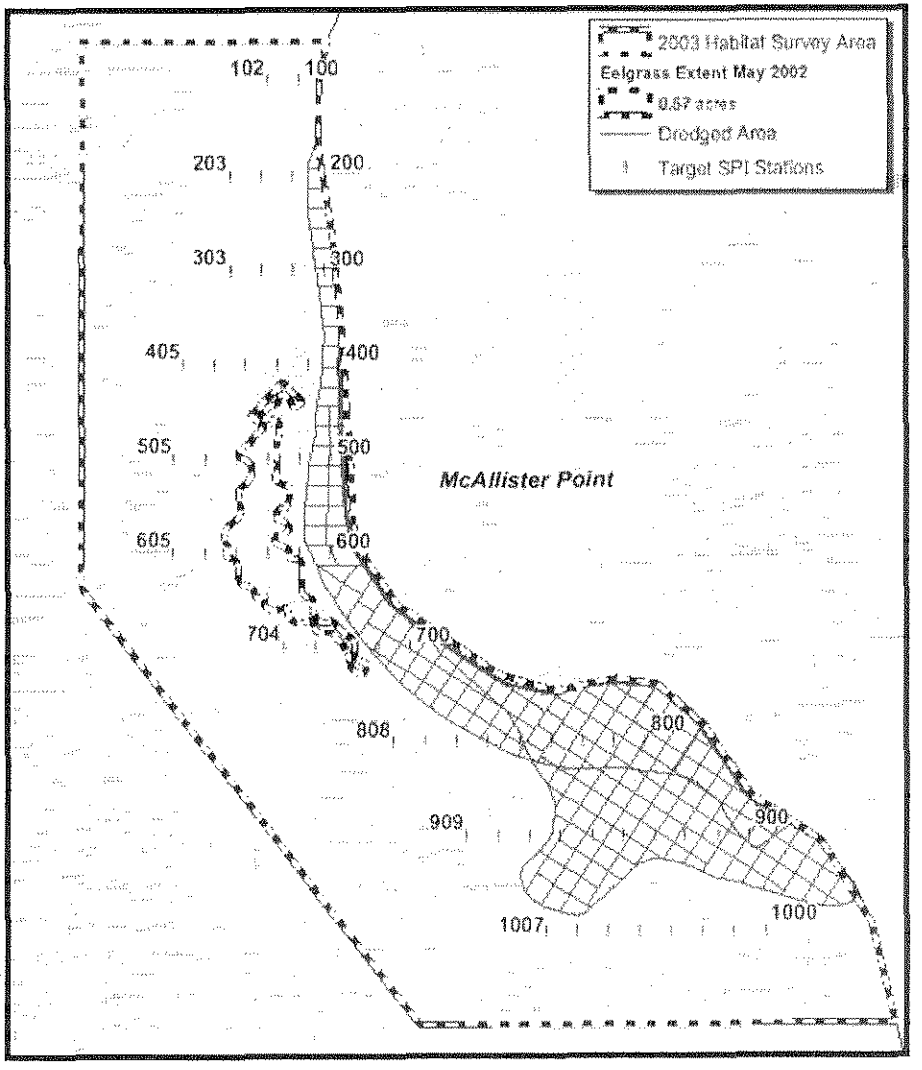
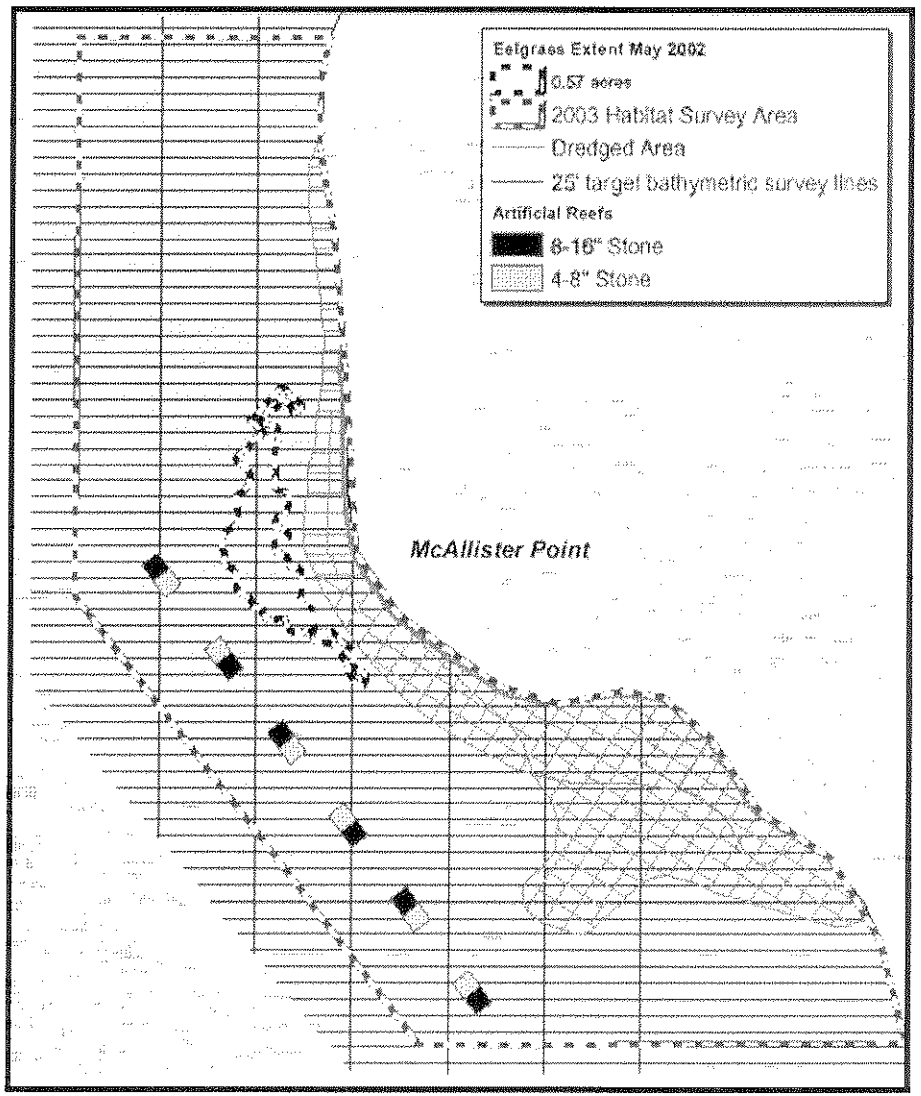


Diagram of the design and operation of the REMOTS® camera.

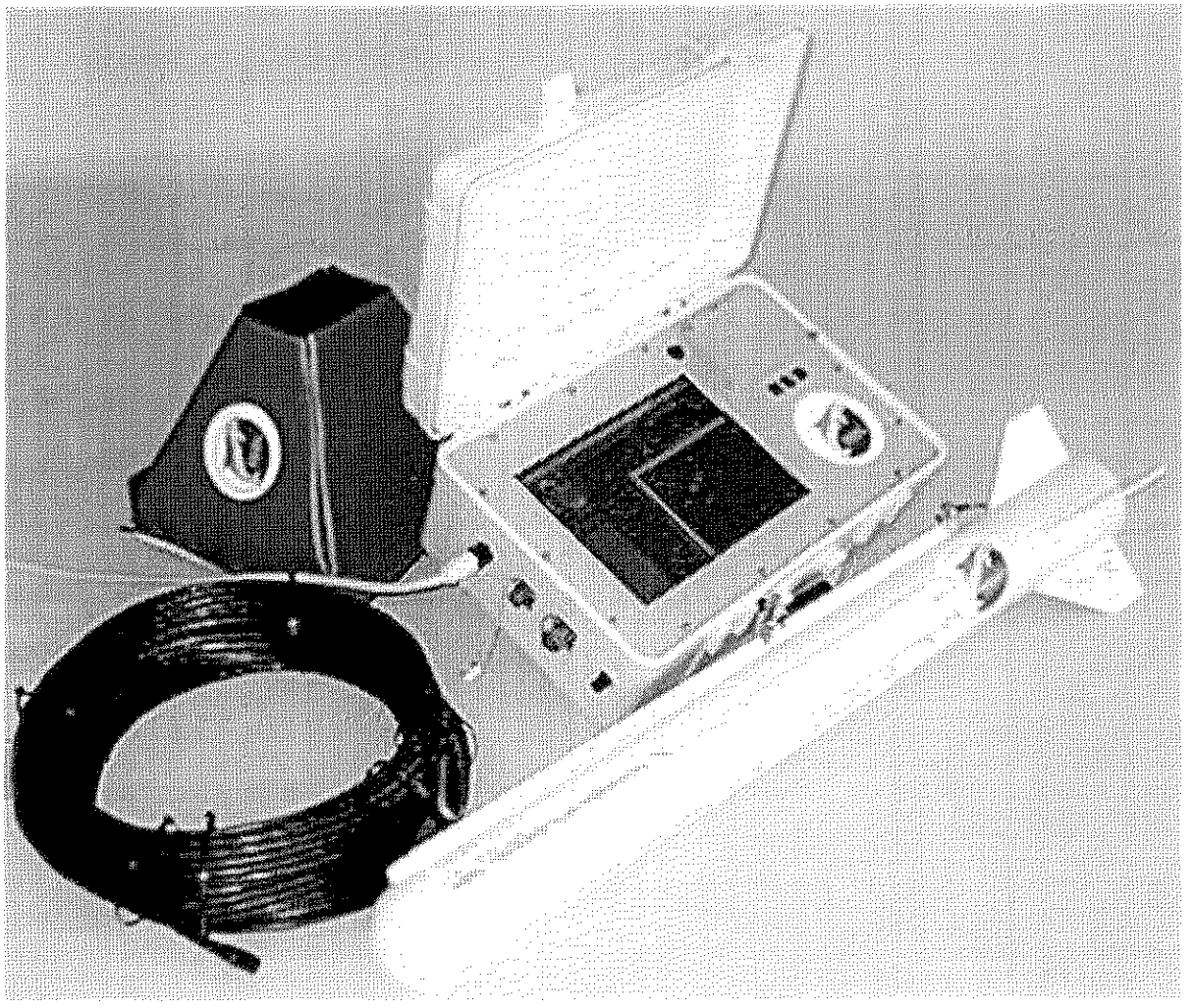
Sediment Profile Interface Photograph Locations



Bathymetry Survey Lines



Marine Sonics PC Side-Scan Sonar

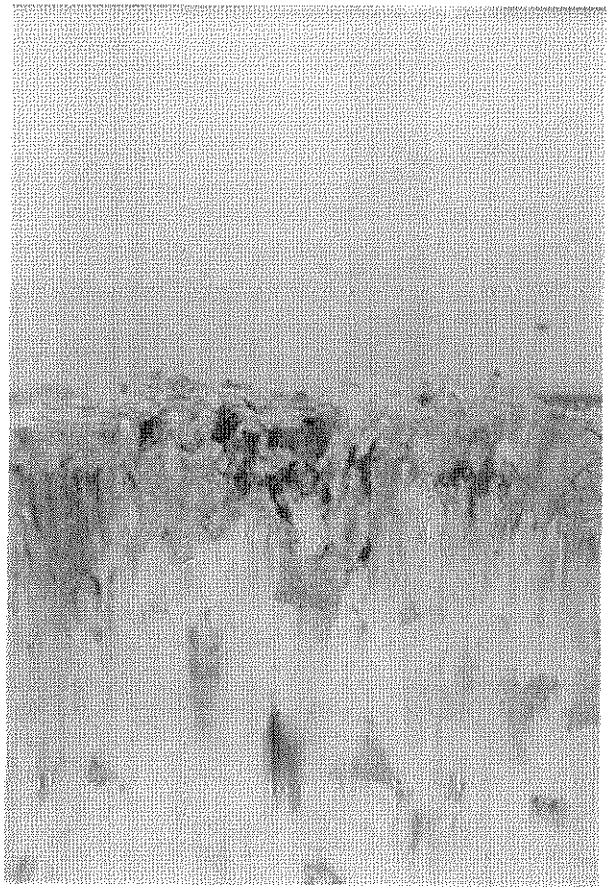


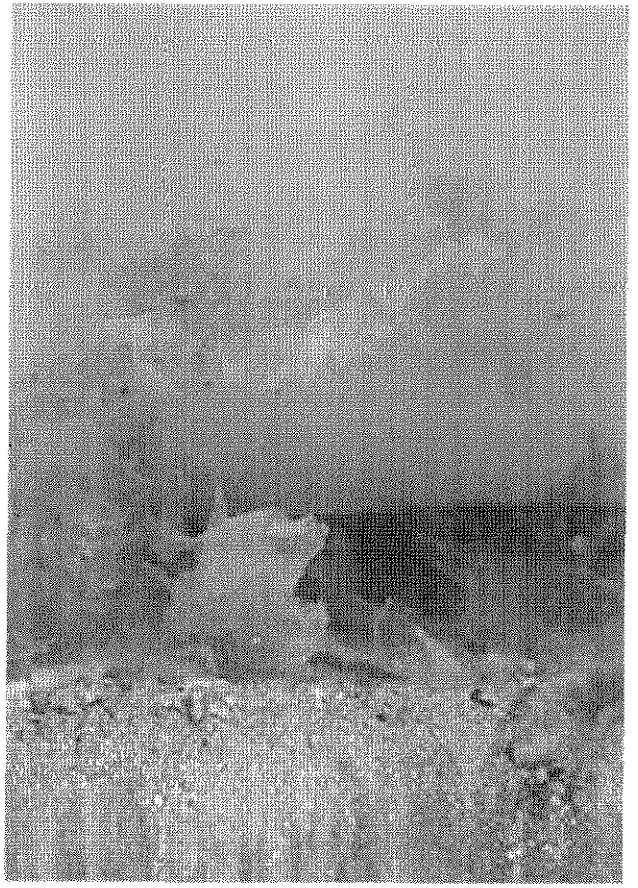
Summer Photographs

Planview Photo of Eelgrass

Adult lobster inhabiting artificial reef

Sediment Profile Interface Photographs





Summer Survey General Observations

- Eelgrass appeared healthy
  - juvenile flounder observed
- Eelgrass bed expansion is to be determined
- Reef Biological Survey
  - sheet-like green seaweed and red filmy seaweed
  - sea stars, sea urchins, whelk, hermit crabs, adult lobsters
  - cunner, summer and winter flounder, tautog
- Fish Traps
  - cunner, spider crab, scup
- Suction Sampling
  - rock grunnel, green crabs, snails, hermit crabs

Summer Survey General Observations

- Sediment Profile Interface and Planview Photographs
  - Sand, silt and macroalgae habitats south and west of eelgrass bed
  - macroalgae-covered rock bottom shoreward of eelgrass bed
- Bathymetry
  - maps will be included in the Habitat Report
- Side-Scan Sonar Survey
  - hard rock bottom along shoreline
  - softer bottom in deeper water
  - artificial reefs were visible

What's Next?

- Fall Survey in October
  - Remnant Eelgrass Bed and Reef Surveys
- Habitat Survey Report expected early 2004
  - analyze and interpret the various types of data collected during the Spring, Summer and Fall surveys
  - compare results to the Baseline Habitat Survey and Essential Fish Habitat Assessment

Questions?

WELCOME

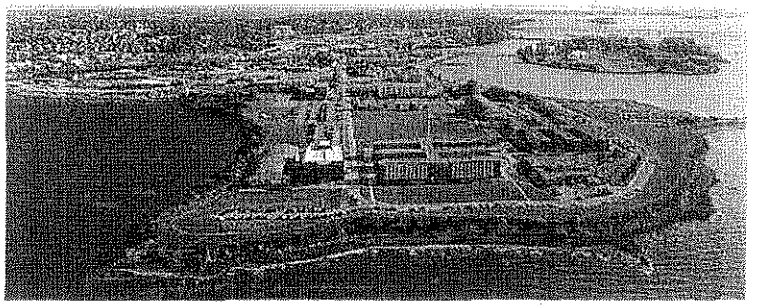
RESTORATION ADVISORY BOARD
PRESENTATION:
NUSC DISPOSAL AREA
STUDY AREA SCREENING INVESTIGATION

Presented By:

NAVAL STATION NEWPORT

Installation Restoration Program

Naval Station Newport
Newport, RI



Tetra Tech NUS Inc.

Enclosure (2)

NUSC Disposal Area

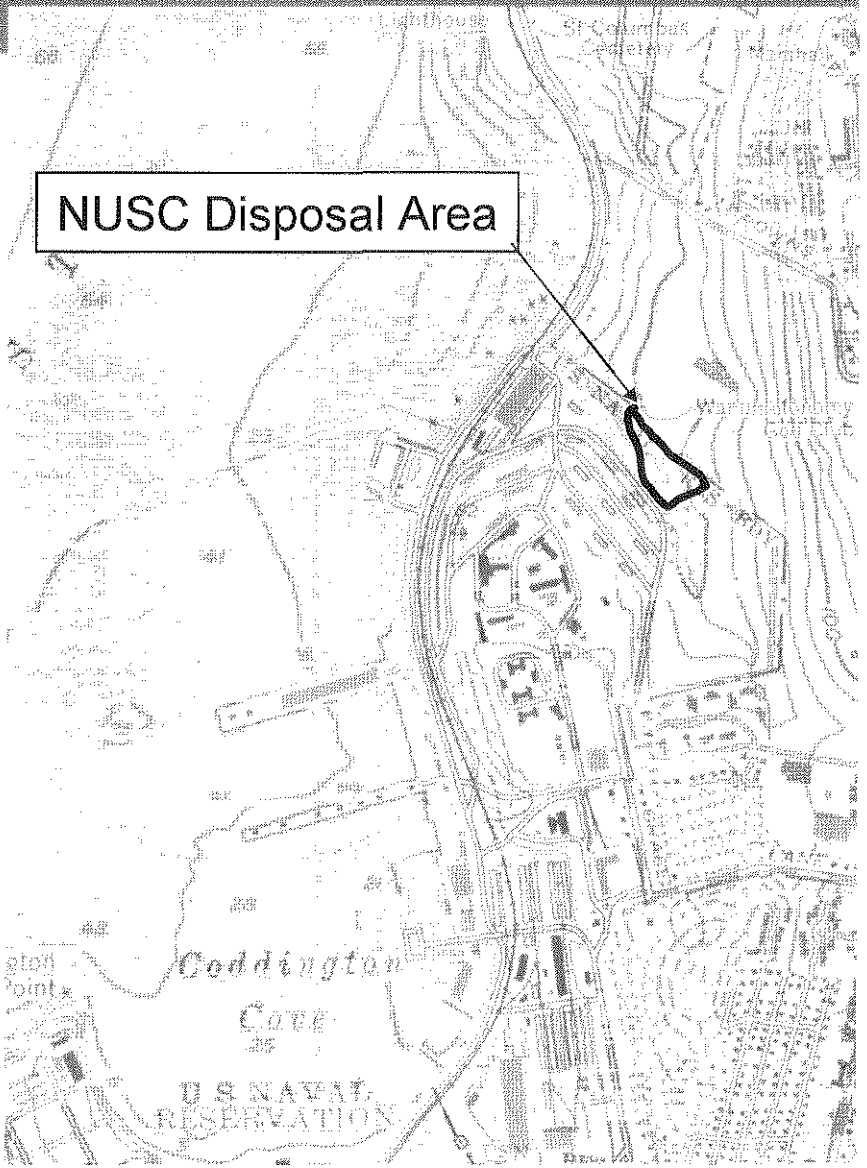
Presentation

- Overview
- History
- Planned Investigations / Actual Investigations
- Findings
- What's Next

NUSC Disposal Area

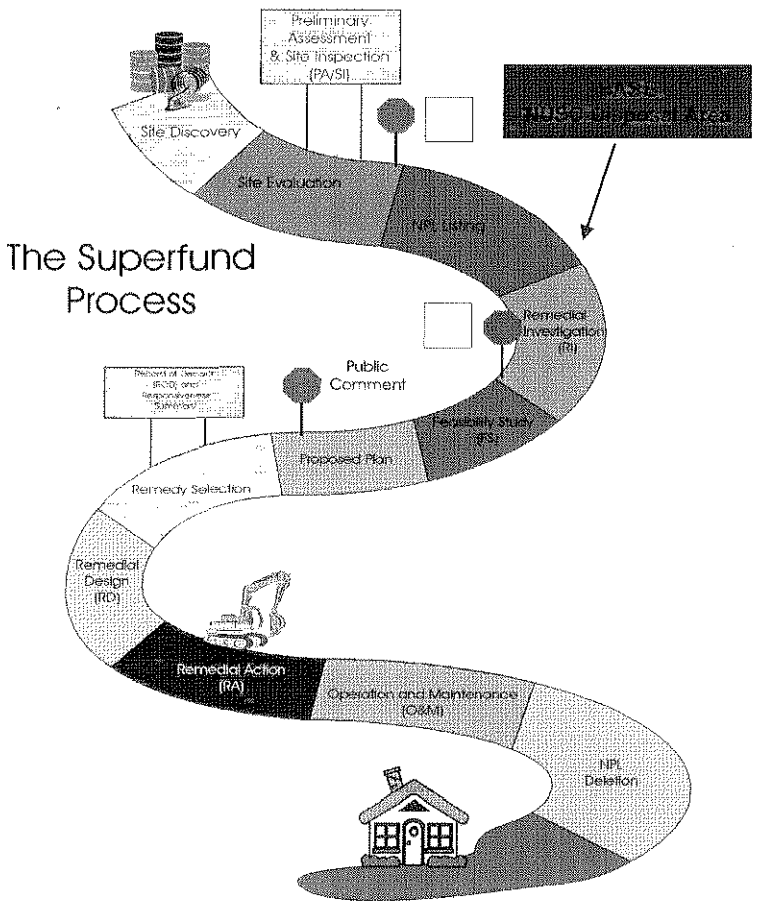
Overview: Location

- Site is located in Middletown, on the North Boundary of the NUWC property.
- Abuts Wanumetonomy Golf Course and Navy Property.



NUSC Disposal Area

Overview: The CERCLA Process

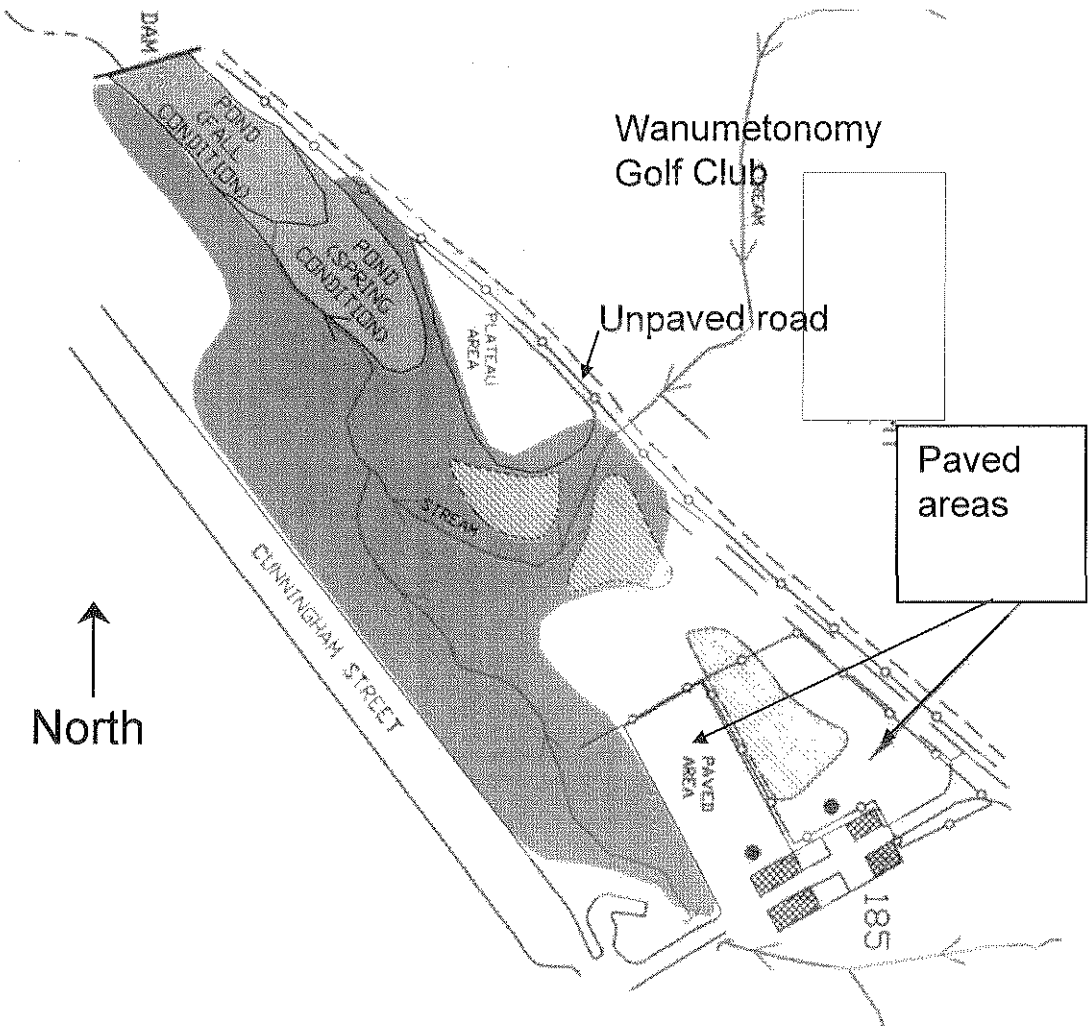


- Site discovery phase
- Identified as a possible area of concern or "Study Area" in FFA
- Lower priority than OFFTA, McAllister, Derecktor, and Gould.

NUSC Disposal Area

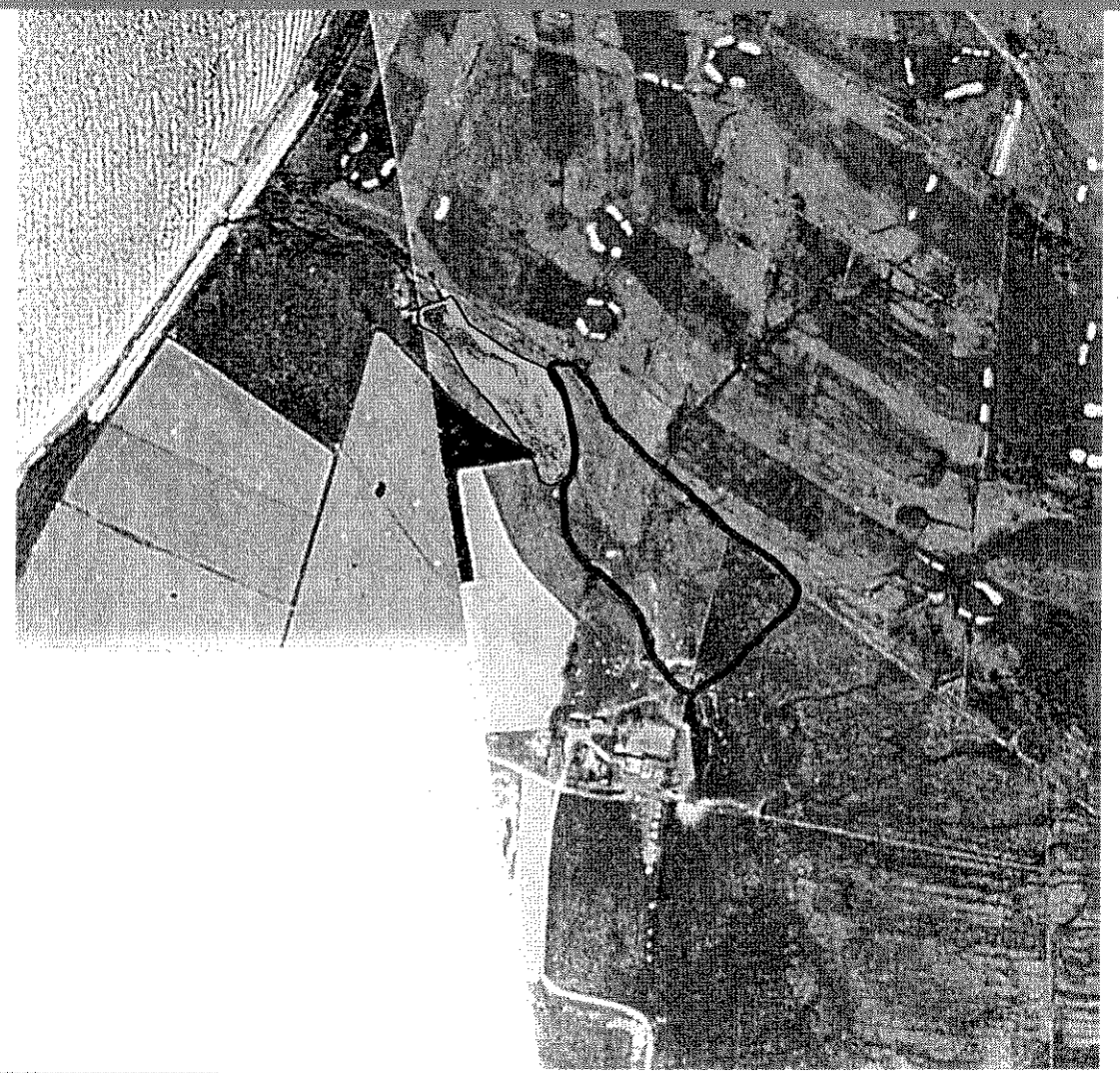
Overview: Current Condition

- The site was used as a disposal area for fill between the 1950s and the1980s.
- Portions of the property used as a storage area from the 1950s to today.

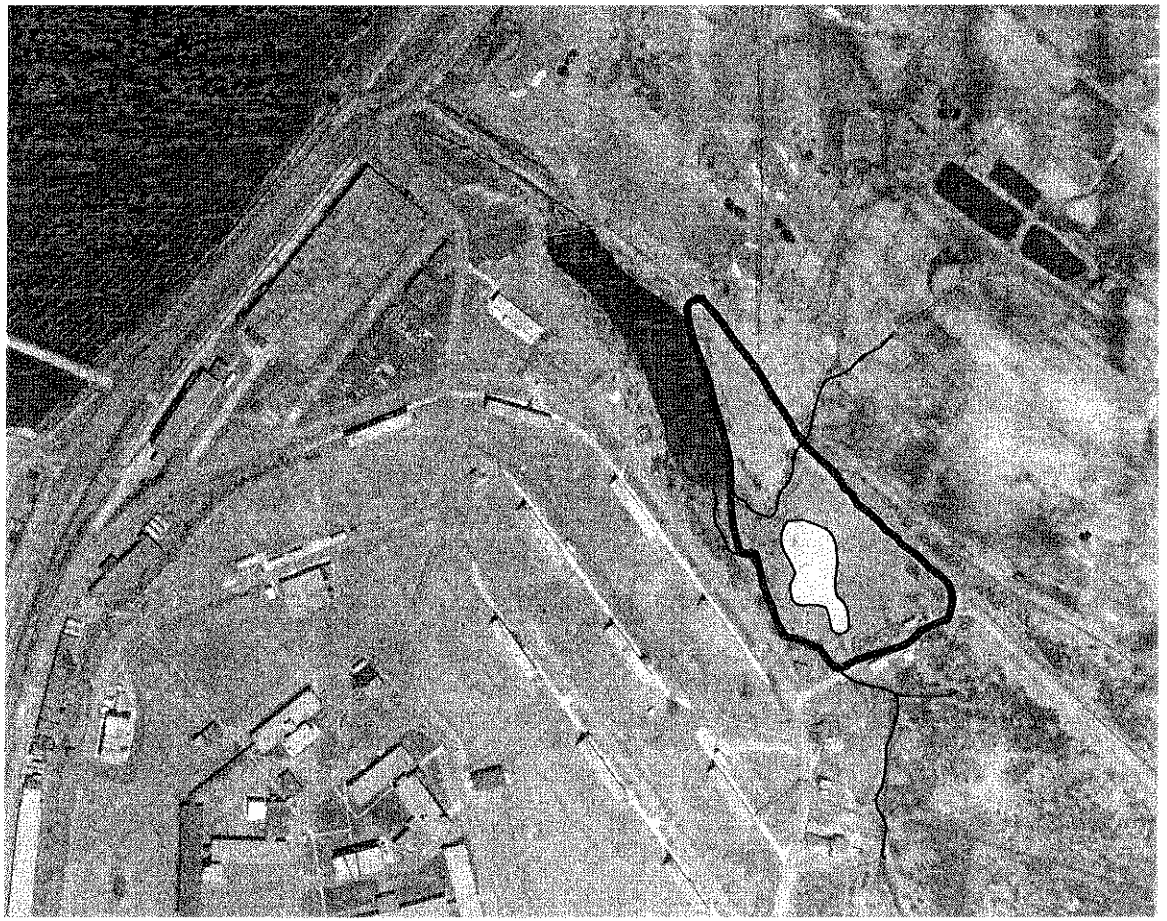


NUSC Disposal Area
Overview: Historical View

- 1939 – Farm: crops, farm pond, streams
- Outline shows future disposal area



NUSC Disposal Area
Overview: Historical View

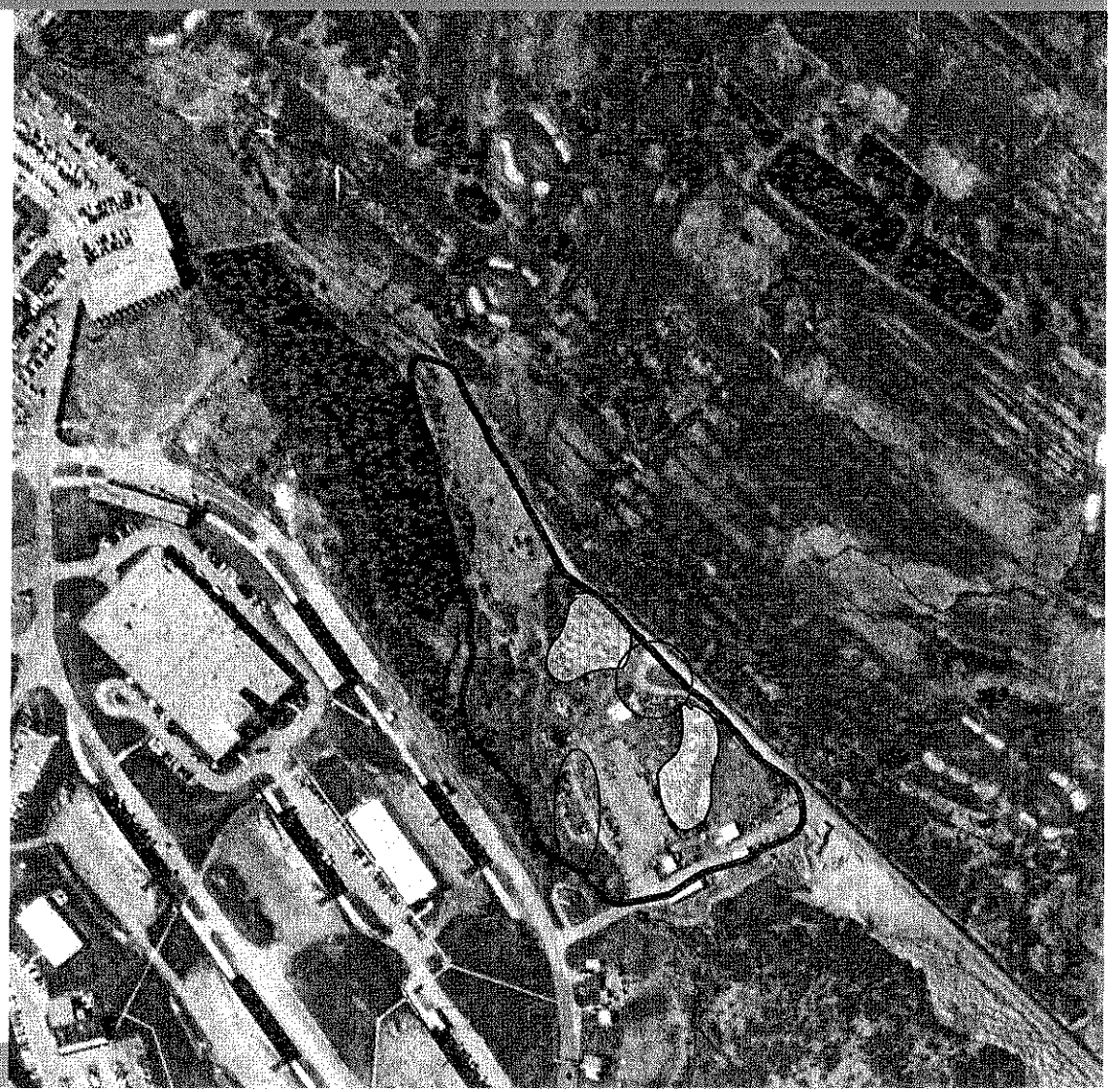


- 1970
- Pond, streams present, roads and first buildings evident
- Some fill activity

NUSC Disposal Area

Overview: Historical View

- 1981
- Buildings in place, small paved area over previous fill
- Two road turnouts present
- New fill in two areas



NUSC Disposal Area
Overview: Historical View

- 1988
- Continued fill areas evident
- Road turnouts gone
- Material storage on west unpaved area

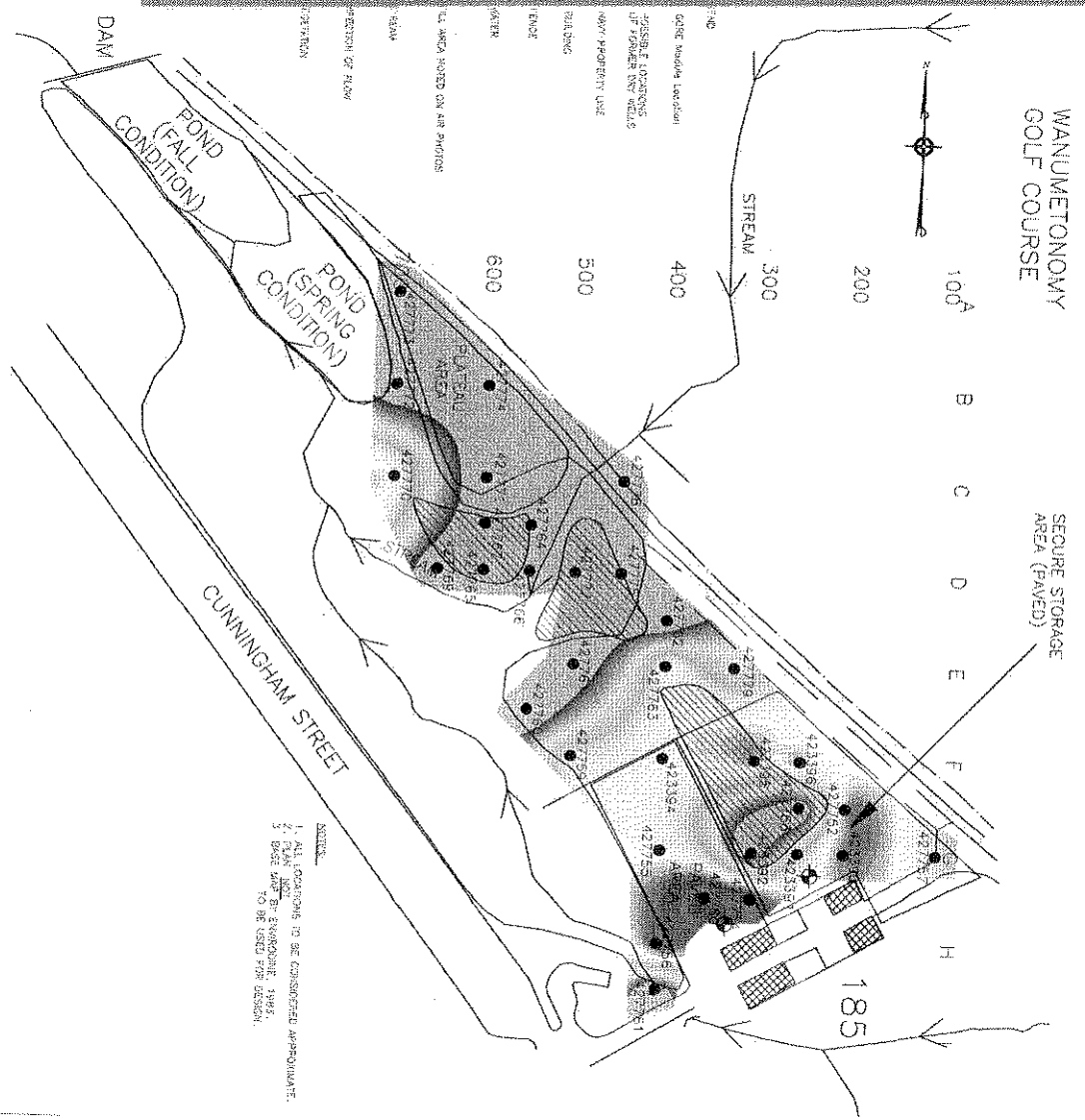
NUSC Disposal Area
Planned Investigations

- Work Plan developed in 1998 updated in 2003
- Planned to do:
  - Soil Gas
  - Test Pits
  - Borings and Wells
  - Surface Water and Sediment
- Actually:
  - Soil Gas
  - Surface Water and Sediment
  - Test pits
  - Borings and Wells

NUSC Disposal Area Investigations

- Soil gas – Indicative of where contaminants may be present.
- Test pits – finds large objects, evaluate soil conditions 0-10 feet deep.
- Borings – Focused soil sampling at depth, greater than 10 feet, allows well installation.
- Wells – Test water, determine direction of groundwater flow.
- Sediment – Test depositional areas where contaminants end up.

NUSC Disposal Area
Findings – Soil Gas



- BTEX (Gasoline type contaminants)
  - Benzene
  - Toluene
  - Ethylbenzene and
  - Xylene
- Relative concentrations – indicative only of where things are, not how much is there.

NUSC Disposal Area

Findings – Soil Gas

- Hydrocarbons (C11-C15)
- Relative high concentration at lower right (southeast) corner, could be a result of creosote on phone pole.

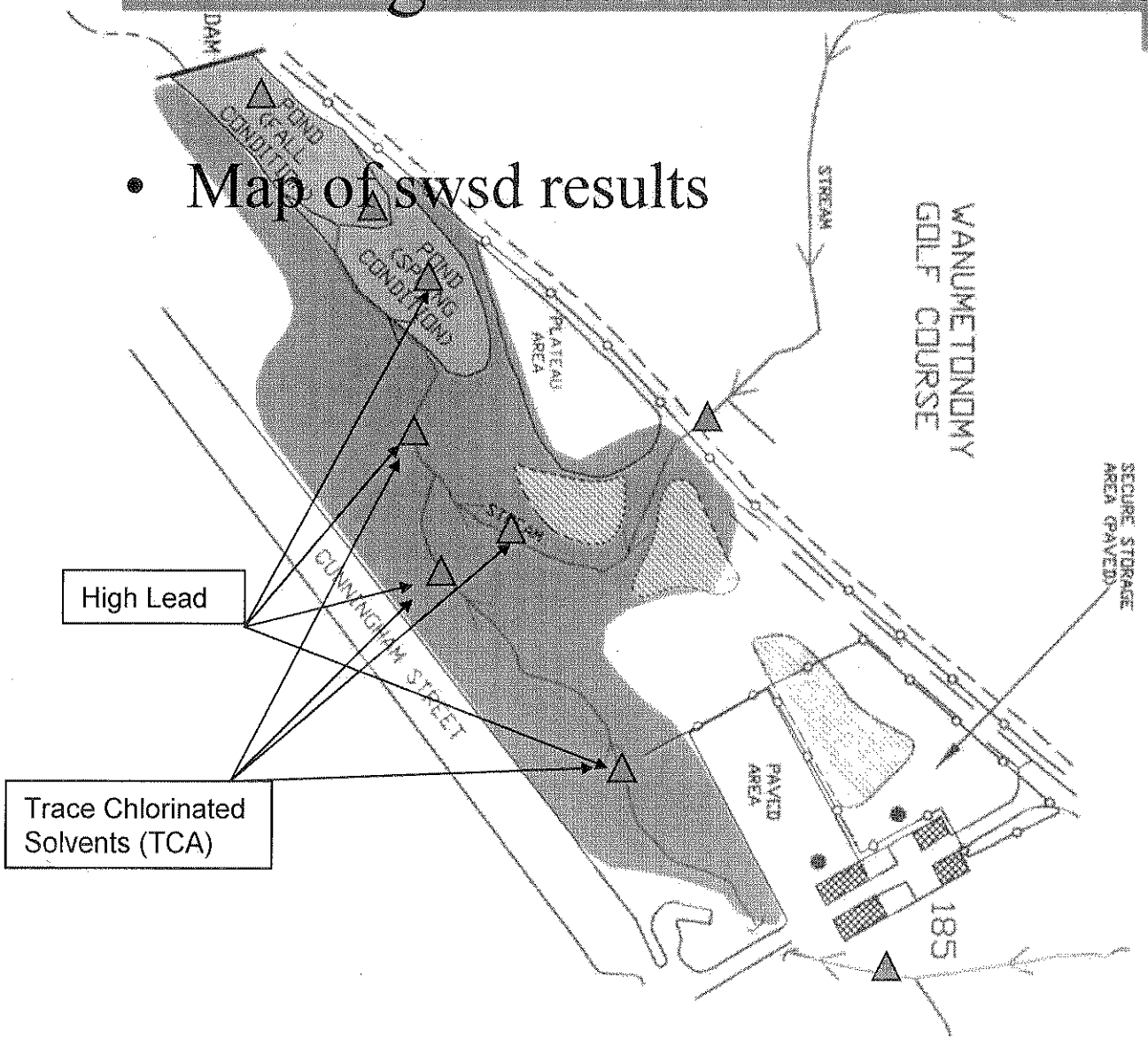
NUSC Disposal Area
Findings – Soil Gas

- Trichloroethene (TCE) – cleaning solvent
- Relative high concentrations at center of former fill area and to the northwest, outside of fill areas.

NUSC Disposal Area

Findings – Surface Water and Sediment

- Map of swsd results

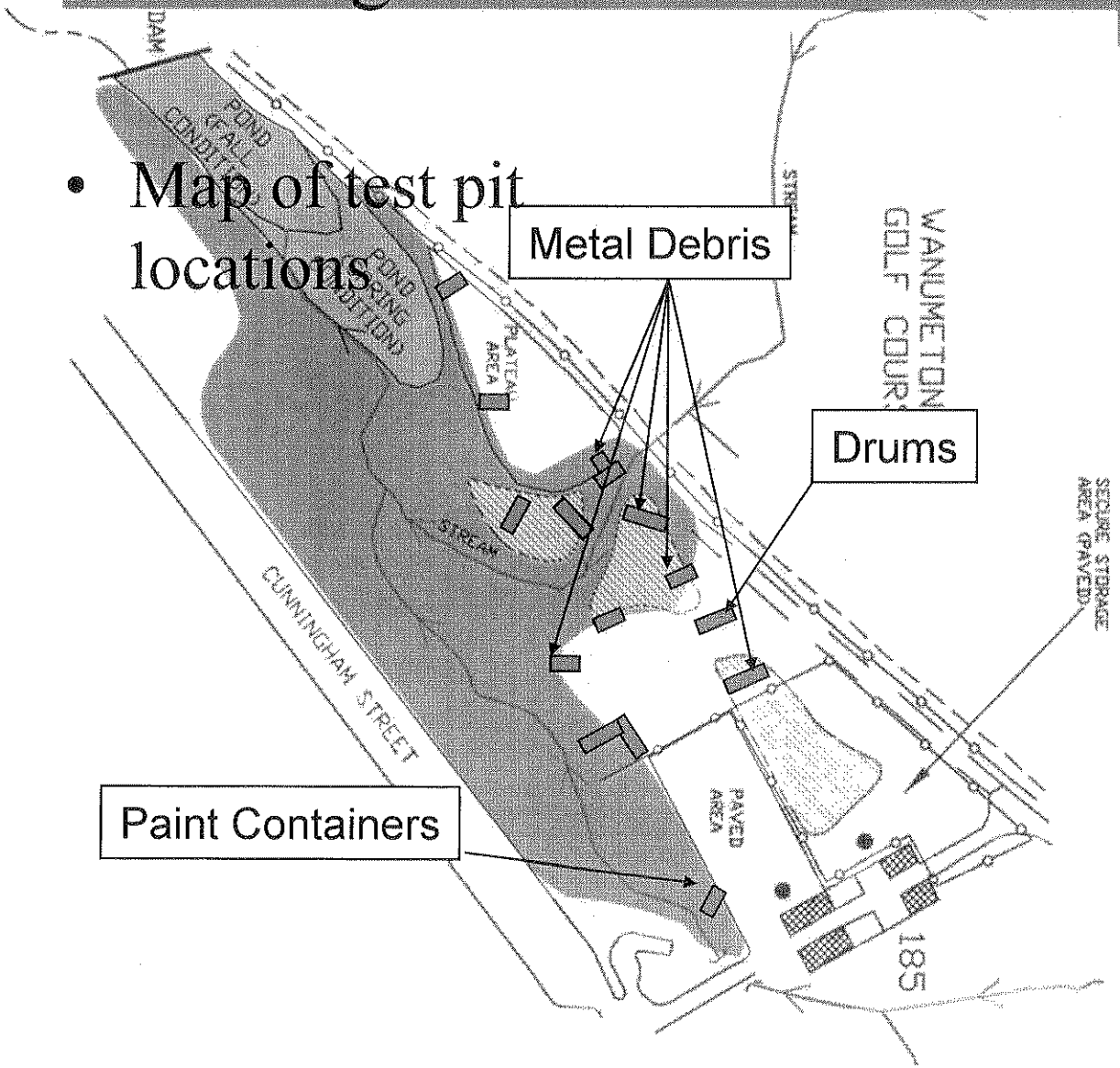


- Collected surface water and sediment at 9 stations
- High lead in sediment at several stations
- Detected chlorinated solvents at several stations at trace concentrations.

NUSC Disposal Area

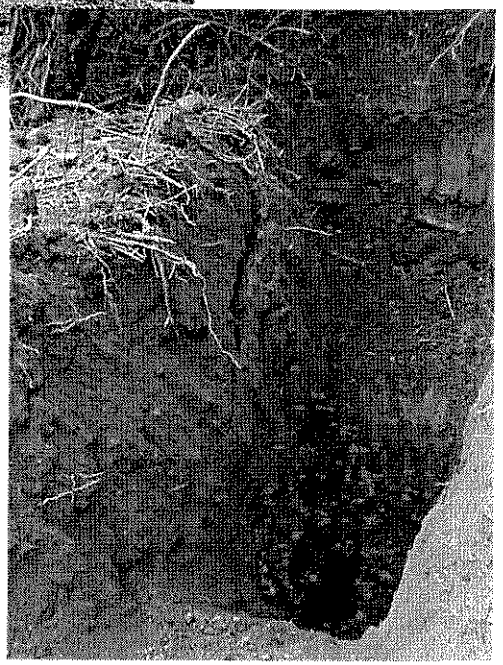
Findings – Test Pits

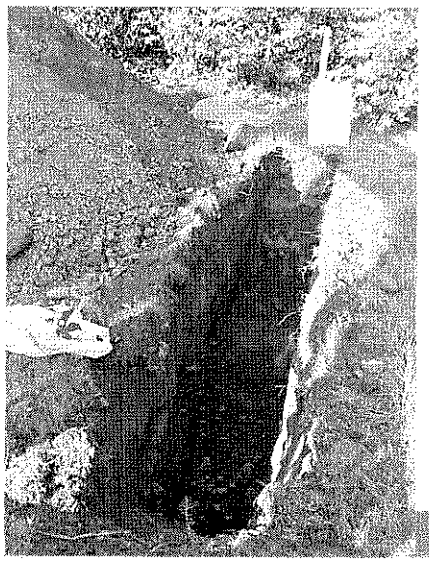
- Map of test pit locations



- Installed 15 test pits, collected three soil samples from each
- Shallow bedrock at most locations
- Debris included stone, brick, concrete, metal, drums, paint containers etc.

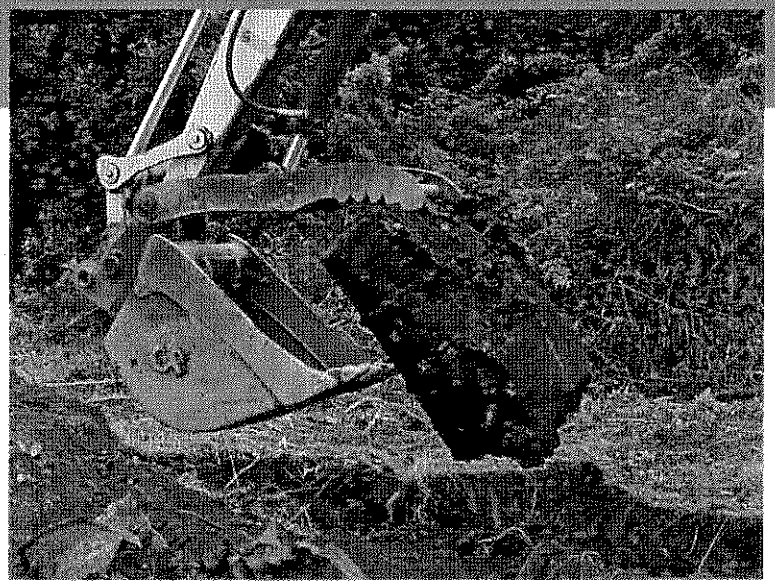
NUSC Disposal Area
Findings – Test Pits



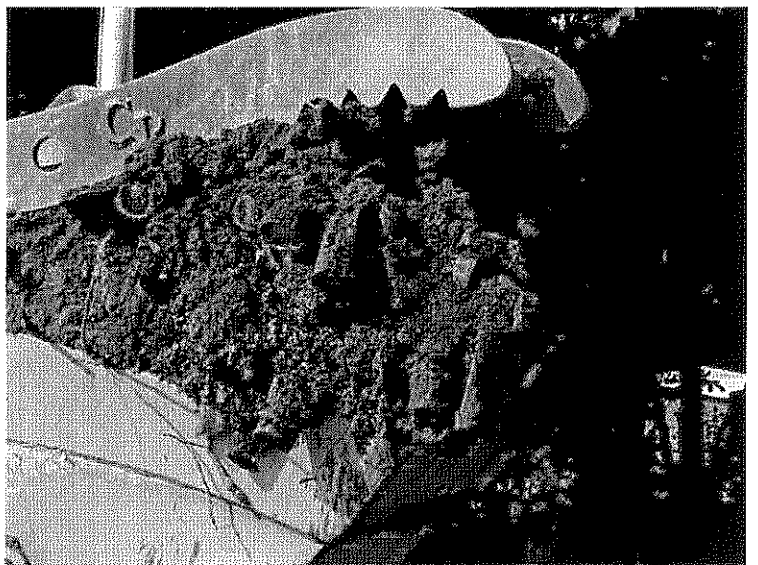


- Soil conditions varied by location
- Shallow bedrock in most areas, showing the steep valley is a natural feature

NUSC Disposal Area
Findings – Test Pits



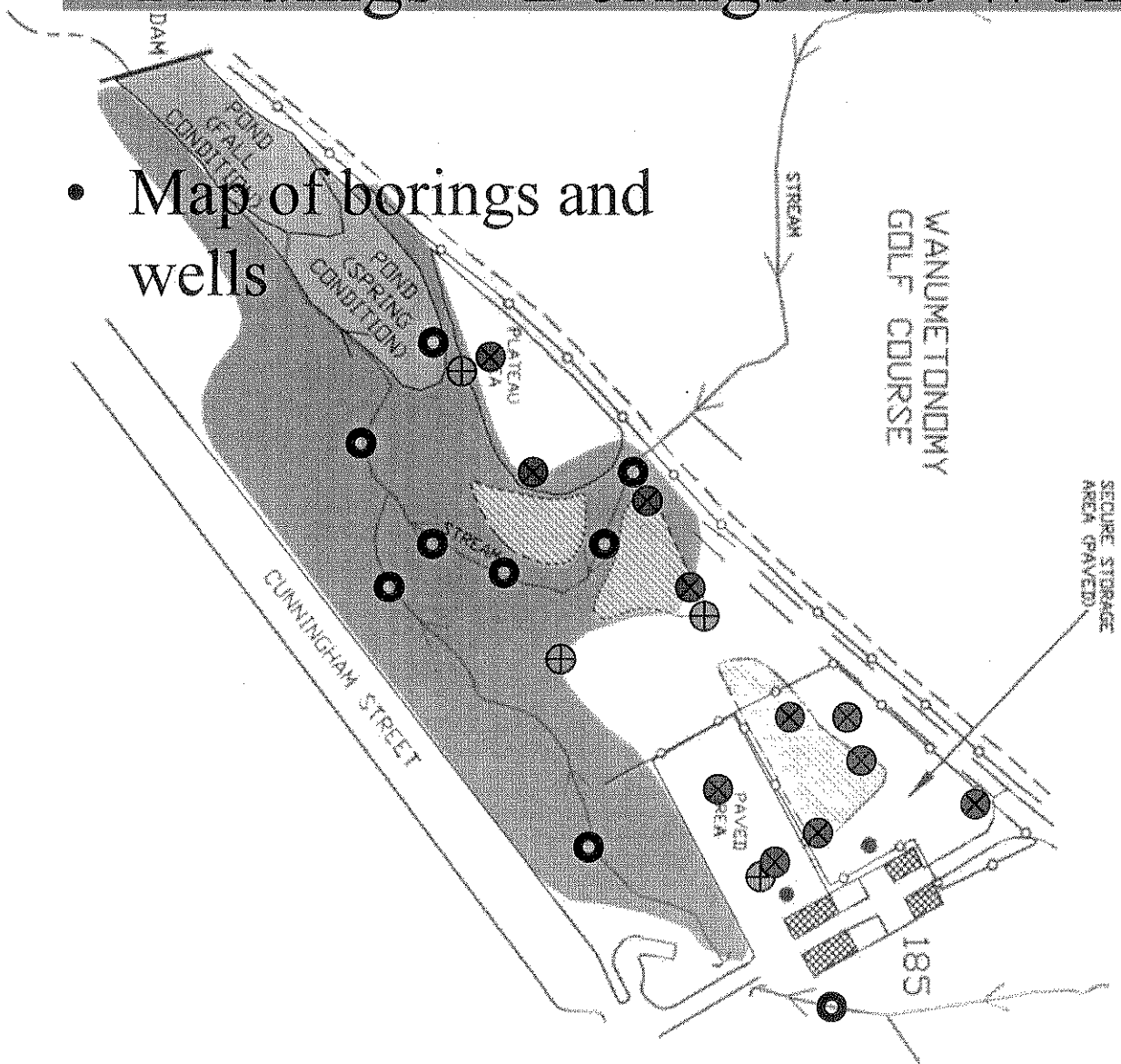
- Drums of substance resembling roofing tar



- Debris including metal, aerosol cans and crushed drums

NUSC Disposal Area
Findings – Borings and Wells

- Map of borings and wells



- Installed 4 bedrock wells
- Installed nine drive points to help determine groundwater flow
- Installed 11 Soil borings – no water in "overburden"
- Results on soil and groundwater samples pending

NUSC Disposal Area

Next Steps

- Complete data evaluation
- Prepare report
  - Determine groundwater flow
  - Determine extent of fill exceeding regulatory criteria
- Return and remove known drums
- Seek any additional drums with focused techniques

Newport Restoration Advisory Board
Project Committee Report-Dredging
September 18, 2003

This month's information on "Dredging" consists of two interesting and informative resource articles. The first, "Dredging Highlights" deals with many aspects of dredging. It describes what dredging entails; why there should be dredging; and the economic need and benefits of dredging harbors and estuaries. One highlight is a reference to the "San Francisco Estuary Institute", which describes and explains the amount of dredging and research that goes on there each year.

The article also explains the types of dredging projects, the effects of dredging, and the varying opinions on the need for dredging. It has been prepared for use as a teaching guide for students and gives suggestions for preparing a debate on the issues.

To enhance this wealth of information, numerous web sites are provided. To support this statement, the second article this month is from the "References" section, which has an extensive Bibliography, which includes Publications, Internet Links, Water Resource Organizations, Water Quality, Watershed Links, and Water Legislation, and also, Dredging.

They should make a great addition to your dredging library.

Submitted by,

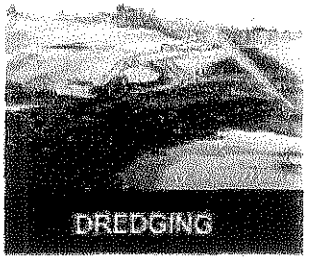
Emmet E Turley

Emmet E. Turley, Chairperson

Enclosure (3)

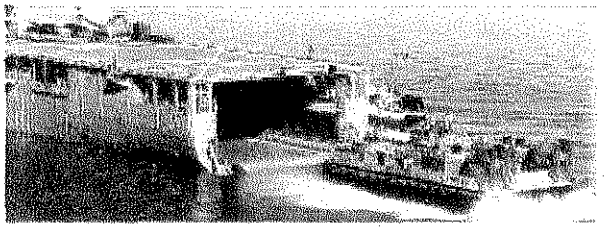
Dredging Highlights

An introduction to dredging



Paul F. Liebman stated in *The Dirt on Dredging*, "The balancing of the two "eco's" -- economy and ecology -- in the dredging debate is vital if we are to maintain the standard of living that is common to most Americans."

Dredging involves moving sand, silt and clay from underwater, where they present a hazard to navigation to suitable disposal sites. Dredging is the physical removal of earthen materials which gather in harbors, access channels, berthing areas, and docks. Over time, sediment builds up on the bottom floor of the waterways as a result of storms, tides, and/or currents. This sediment is often contaminated with toxins, which have settled out of the water. When dredging is not done, large ships may not be able to enter harbors. Ultimately this effects the economic stability of an area, as large ships cannot safely enter waterways.



Dredging is done on most commercially accessible waterways including, but not limited to, the Mississippi River, the San Francisco Bay, the Chesapeake Bay, the Hudson River, the Great Lakes, and the ports along the east and west coasts. Much of the dredging is performed by the U.S. Army Corps of Engineers and the U.S. Navy.

Why should we dredge?

Dredging is needed to ensure safe shipping operations, so that large ships do not scrape bottom as they near the ports with full hulls. If dredging is not done only smaller sized ships or cargoes can enter the ports. This means that larger ships must off load their cargoes onto smaller ships. If we are dealing with products such as gasoline or oil, this potentially can pollute our waterways if spills or leaks occur.

By keeping ports open domestic and international trade is maintained. Hundreds of thousands of jobs are connected to the support of shipping. Access by fewer ships results in fewer jobs. Some of the jobs that are created include dock workers, longshoremen, seamen, and marine terminal personnel, truckers, and harbor developers. According to an article in the August 13, 1997 edition of the Asbury Park Press, "A Potential Solution for Dredge Spoils That Helps Everyone", the New York/New Jersey harbors directly and indirectly employed more than 160,000 people.

The economic effect of harbor commerce on New Jersey was as follows.

Total Economic Activity	$ 93 Billion
Total Local Revenue	$ 29 Billion
Total Jobs	200,000
NJ Jobs	85,000
NJ Taxes	$330 Million
NJ Exports	$13 Billion
NJ Manufacturing Jobs	70,000
NJ Manufacturing Income	$ 3 Billion

Dredging and the San Francisco Estuary

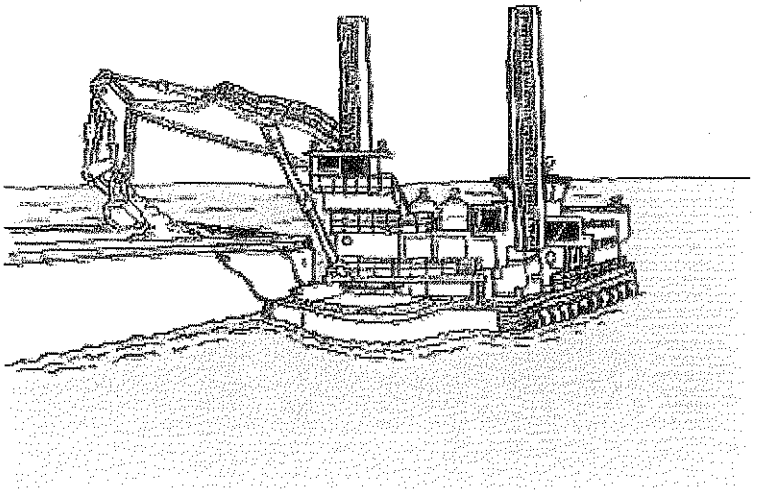
Approximately eight million cubic yards of sediment is dredged annually from the San Francisco Estuary. This is necessary to keep the San Francisco Bay and Delta navigable and the waterways available for large ships.

San Francisco Estuary Institute

Approximately 4,000 commercial ocean-going ships move through the estuary yearly carrying over 50 million tons of cargo worth an estimated $25 billion.

How is dredging accomplished?/Where does the dredged material go?

Large vessels or barges, which are equipped with "buckets" or suction tubes remove dredged material and place it on barges. Once a harbor is dredged, the dredged material must be properly disposed. The material dredged has the ominous name of "dredged spoils", which conjures up the impression that all dredged material is hazardous - and this is not always so. Actually dredged material can be a resource and put to productive use if disposed of properly.



Dredges used today are designed to be more environmentally protective and efficient. Engineering included in the plans and permits for dredging projects include the use of Best Management Practices. Some of today's Best Management Practices for dredging include:

- *the use of silt curtains to reduce turbidity,*
- *seasonal restrictions during fish migration periods,*
- *dredging only on the incoming tide,*
- *hydraulic or Closed Clamshell dredging to reduce the generation of suspended sediments,*
- *shunting which involves pumping of the free water in a barge to the bottom of the water body which reduces turbidity, and*
- *employment of an independent, certified, on-board dredging inspector to ensure compliance with permit conditions.*

In New Jersey, the Department of Environmental Protection has determined that the following are acceptable use options for dredged material:

- *beach nourishment and dune creation,*
- *daily and intermediate cover for landfills,*
- *remediation of contaminated sites,*
- *road embankments or berms,*

- *structural fill for industrial sites and parking lots,*
- *blending material,*
- *construction aggregates, or*
- *artificial or man-made islands.*

However, each project and disposal option is considered individually on a "site-specific" basis. Siting factors such as engineering design, construction, operation and maintenance procedures, and finally closure and potential use of the site are considered.

Types of Dredging Projects include -

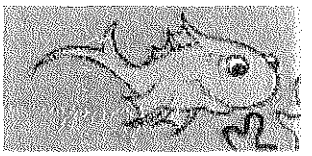
- *federal navigation channels*
- *state navigation channels*
- *private berths and access to channels*
- *military facilities, and*
- *private marinas.*

Dredged material is frequently disposed of in specially designated areas in oceans, lakes, and rivers. For example, in March 1998, three permits were issued in NJ. One permit allowed for 400,000 cubic yards of clean sediment to be reused through the Historic Area Remediation Site (the MudDump Site) in the Atlantic Ocean. Another was issued, which allowed for 35,000 cubic yards of material to be used in the remediation of an abandoned coal mine in Pennfield, PA. The third permit authorized the disposal of approximately 90,000 cubic yards of contaminated material to be buried in a pit beneath Newark Bay, which was dug specifically for the disposal of contaminated sediment. These permits allowed for the disposal of dredged material in three separate manners. These examples also demonstrate how much material needs to be removed in order to keep the ports of NJ and NY open.

Dredged material is usually disposed of in close proximity to where it was dug up. Typically it is covered with sand or other clean fill which acts as a cap or cover. The cap is designed to limit the contact between aquatic organisms and the material.

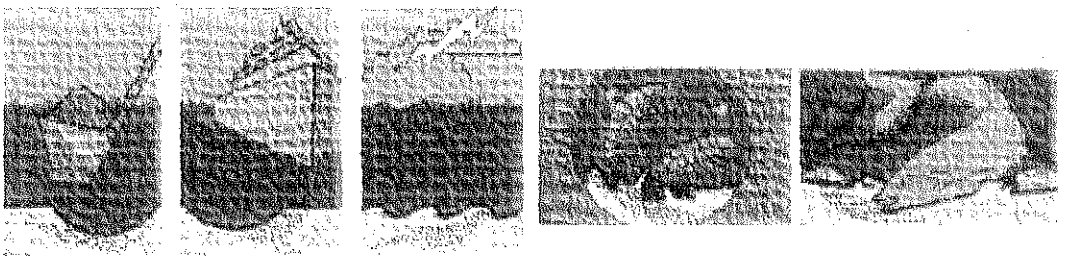
Multistakeholder groups have been formed to look at alternate uses of dredged material. Recent uses of dredged materials have included combining the dredged material with other materials to create a parking lot for a new mall in Elizabeth, NJ, and the possibility of using additional abandoned mines in Pennsylvania as the repository of hundreds of millions of tons of dredged mud.

Effects of dredging



Dredging and the disposal of dredged material temporarily increases turbidity, influences bottom-feeding communities at and near disposal sites, and may affect the behavior and physiology of fish and other organisms. It may also redistribute toxic pollutants and increase their availability to aquatic organisms.

In many areas where dredging takes place, hotly contested debates have surfaced concerning the effect of dredged material disposal on waterways and the redistribution and release of toxic contaminants in dredged sediment.



Dredging Shipping Storms Biotic Disturbance

Should we dredge or not?

People have strong opinions on dredging. Many heated arguments have occurred over this issue. People are either for dredging or against it.

Debate the Dredging Issues

Materials:
Access to research tools such as the Internet and newspapers.

Description:
Have students debate both sides of the issue. GE has developed a website that gives their reasons for being against dredging. This site also contains information on PCBs and the effects on health. This site can be found at *The Hudson River Web Site.*

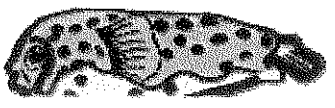
Whenever you study an issue, it is important to look at all sides of the topic. One site you may want to visit includes some interesting dredging options. They can be found at *Miller Environmental Department.*

Discussion Questions:

- *Based on the information that you were presented, would you be for or against dredging in you local waterway?*
- *How do you feel about using dredged materials as landfill?*

Issues students may want to include in their study as they prepare for their debate include:

- *What is dredging?*
- *Why is dredging necessary?*
- *What are the issues?*
- *What are the benefits/consequences of dredging?*
- *Economics? Why do we dredge?*
- *What are the effects of salt-water encroachment?*
- *Who decides whether dredged material can be used?*
- *What is the effect of dredging on humans, fish, animals,*



habitats?

- *What are the uses of dredged material?*
- *Who does dredging? Is it monitored?*
- *How often is dredging done? Who decides?*
- *What type of equipment is used?*
- *What happens to dredged material?*
- *Are there restrictions on the uses of it?*
- *Who controls it?*
- *Are there emerging environmental companies dealing with recycling this material? Who are they? How do you hear about them? What are some of the innovative ways to use dredge materials?*

*To find out more information about **Dredging**, here is a collection of websites that you may find useful.*

Watersheds | Water Quality | Water Monitoring | Water Legislation | Dredging Highlights | Classroom Applications | References

hack to


Home Page

About BEES

Web Index

Programs

Resources

For more information about BEES, please e-mail KWyatt@TheWatershed.org

*Jerome Whitson, a sophomore at Miami University of Ohio and a **BEES** summer intern for 1998, helped with the design of this page.*

NAVAL STATION NEWPORT INSTALLATION RESTORATION PROGRAM

October 2003 FY04

Activity Update Presentation

- IR Update – Navy Budget Status 03
- New Navy Budget & Execution Plan for FY 04
- Update to Anticipated Work FY04 NAVSTA Newport

TAPP/TAG Overview

- Overview and Presentation by EPA TAG Members

November 2003 FY04

- Report on the findings of NUWC Disposal Area Tank Farm's Clean up Status:

Presentations and Discussions
Presentation by Navy
Presentation by RIDEM
Presentation by EPA

December 2003 FY04

- No Meeting due to the holiday

January 2004 FY04

- Gould Island Work Plan Presentation
- Community Co-chair election
- Focus/Theme for Year
- Strategic Plan for Year
- Meeting(s): Agenda Subjects/Event Plan for Feb-Nov